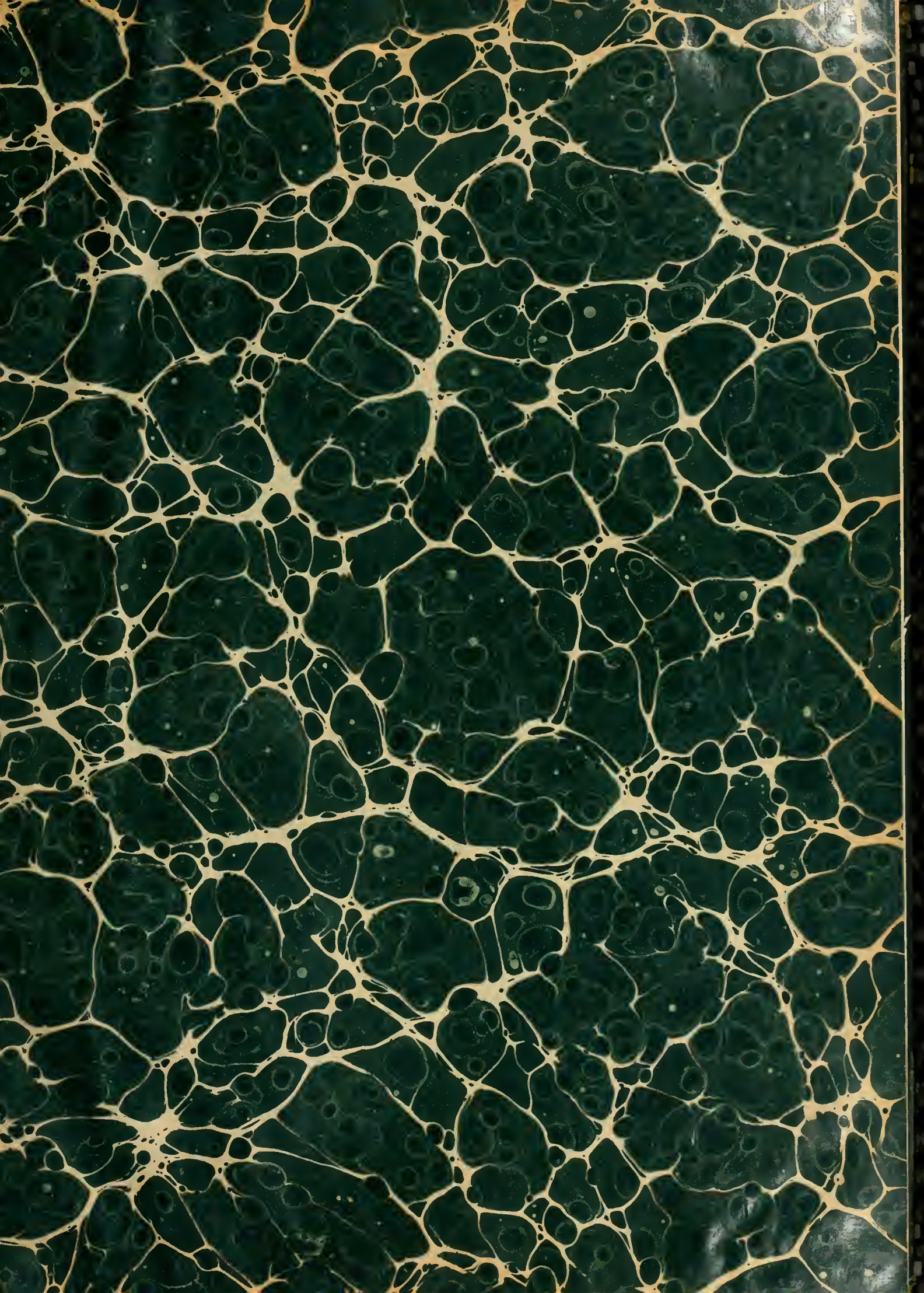
THE LIBRARY OF CONGRESS
1800
Class F74
Book N9 N865



THE WORCESTER MAGAZINE

135
519

Devoted to

Good Citizenship and Municipal Development

VOLUME XIII

JANUARY-DECEMBER, 1910

PUBLISHED BY

THE BOARD OF TRADE, WORCESTER, MASS.

WORCESTER, MASS.
THE BLANCHARD PRESS

CONTENTS.

[illegible] Steel Ladder Co., 149
Administration of 1910, The 1
Alabama's Need of Truck [illegible] 220
Alsten & Goulding Co., 75, 179
America in the Far East, 317
American Exposition at Berlin, 10
American Sash Trimmer, 211
Are Freight and Express Rates too High? 171
As to Dues, 197
Atlanta, Ga., 17, 256
Bartlett, Commodore, 102
Baptism in Civic Pride, A 339
Bellingham's Efforts, 125
Birmingham, Ala., 67, 234, 314
Board of Trade Notes, 21, 45, 51, 74
Bonus in Canada, The 298
Bonus Lands a Big Factory, 256
Booster Buttons, 234
Boston & Albany Uptown Office, 12
Boston & Worcester Street Railway Co., The 206
Bradley Car Works, 108, 238
Brauns, Henry, Co., 87
Brosnihan Wrench Co., 184
Buck, E. A., & Co., 183
Buenos Ayres Exposition, The 6
Buffalo, N. Y., 64, 105, 159
Building Operations, 22, 256, 341
Business Office Patriotism, 20
Business Situation Here, The 96
Busy Man, A 39
Call of the East, The 94
Capitol at Concord, The 322
Case Shoe Co., 88
Census and the Telephone, The 172
Census of 1910, The 189
Central Autogenous Welding Co., 267
Central Supply Co., 82, 112
Chamberlain, Robert H., 194
Charming Story Artistically Portrayed, 17
Chase Patent Granite Saw, 108
Church of St. John's, 249
Citizens Factory and Law School, 35
City at Play, The 169
City Beautiful, The 155
City Congestion and Trolley Transportation, 171
Claflin-Sumner Coal Co., 293
Clearview, 211
Coghlin Electric Co., 75
Coming Meetings, 291
Commercial Clubs in the South, 216
Commercial Pilgrimage, A 213
Commercial Secretaries' Association, 205
Commission Government, 126
Commission Plan, The 141
Commonwealth Motor Mart, 182
Compensation for Accidents, 38
Concrete vs. Wood Flooring, 336
Connecticut River Electric System, The 325
Contempt for Law, 340
Co-operative Advertising, 324
Corn—The Basis of our Cereal Wealth, 217
Corset H Co., 25, 111
Country Over, The 205
Crutchley Machine Screw Co., 294
Crompton & Knowles Loom Works, 23
Current Events, 16, 51, 70, 142, 173, 199, 235, 257, 289, 314, 341
Curtis & Marble Machine Co., 28
Dangers that Menace the Republic, 117
Dead Horse Hill Climb, The 122
Decadent New England, 46
Denver and the Steel Trade, 256
Denver Freight Rates, 284
Dolliver, Edward B. 228
Domestic Vacuum Cleaning Co., 292
Dorgas & Co., 114
Duty of the Hour, The 287
Easton, Pa., 12, 205
East Organizing, The 12
Eddy Razor Strop, The 114
Elevating Influence of Artistic Printing, 14
Elbert's Experience, 100
Economy Problem, 4
Education and Necessity of a Navy, The 89
Factory Sites, 14
Fairness for Quality and Quantity, 247
Forty Thousand Club, 159
Fowler & Co., 85
Framework of the City, The 156
Framingham New Factory, 6
From Death to Life 97
From the Field, 74, 96, 203, 262, 289, 317
Garden City 35
[illegible] 283
[illegible] 210
[illegible] 64
[illegible] 232
[illegible] 307
[illegible] 208
[illegible] 255
[illegible] A 160
[illegible] Men, 115
[illegible] 22
[illegible] 1911, 242
[illegible] 3
[illegible] 5
[illegible] 142
[illegible] 149
[illegible] 209
[illegible] 223
[illegible] 103
[illegible] 229
[illegible] 174
[illegible] 188
[illegible] 307
Howe Employment Exchange, 87
Howe Memorial, The 168
How It Works in Steubenville, 107
How Springfield Does It, 4
Hunt Metal Corner Co., 211
Ideal City, The 153
Improved Tram Service, 144
Indianapolis, Ind., 52
Influence of Commercial Bodies, 205
In Picking Out a Site What Should Appeal to a New Industry? 231
Interesting Consular Circular, 343
International Congress, The 199
International Navigation Congress, 228
In Worcester's Footsteps, 159
Japan, from a Japanese Standpoint, 11
Joliet, Ill., 32
Jones Supply Co., The 177
Kansas City, Kan., Where the Door Swings Open, 61
Kendall, O. S., & Son, 348
Kendall, W. D., Co., 75, 209
Kerosene Engine, New 266
Kidder, R. E., 55, 78
King, Henry W., 284
Kingston, John P., 208
Lake Mohonk Conference on International Arbitration, 167
Landing of the Pilgrims, The 255
Large or Small Factories, 237
Lauf Hat Factory, The 22
Leagne's New Name, 313
Leland, W. H. & Co., 55
Lesson of Fitton Field, The 254
Lesson of Grand Rapids, The 312
Lincoln Realty Co., 212
Lincoln Theatre, The 263
Linked to the Grand Trunk, 236
Lively "Old Settler," A 303
"Live Wire," The 298
Local or Foreign Investors, 289
Londonderry, Ire., 9
Loses $4,000,000 in Five Years, 201
Lowell Finance, 4
Luxogravure of Senator Bailey, The 121
Lynn's Unusual Problem, 235
Machinery Markets, The 116
Madsen Automatic Water Heater, 177
Making Merrimack Navigable, 159
Manifests for Canadian Shipment, 284
Marble, Edwin T., 195
Marinette, Wis., 67
Marlboro's 250th Anniversary, 191
Marsh, B. F., 212
McMillan, Donald B., 8
Mechanical, Electrical and Textile Exposition, 1910, 9, 40, 75
Melting Pot, The 57
Merchants' National Bank, 264
Merrifield Building, 266
Millions for City Improvements, 280
Model Farms, 159
Moderate Cost House, 276
Moore, Geo. C., Co., 109
Morgan Co. Victories, 347
Motor Truck, 181
Mosher Real Estate Co., 208
Muncie, Ind., 52
National Municipal League, 63
National Natural Flavors Co., 212
Necessity of Water Competition, 316
New Bedford's Loss, 237
New England Contracting Co., 348
New England Corn Exposition, The—
Editorial on, 311
Engagement of Mr. Clore, 254
Importance of, 140
Results of, 329
Story of, 308
What it Means to Worcester, 19
New England—
Fair, 230
Motor Supply Co., 150
New Cycle of Development, 299
Telephone Index, 177
Unity, and Lack of it, 339
New Industries for St. Louis, 204
New York's Public Service Commission, 224
Nilo Meter, The 151
Ninety-six Hours or Forty-eight? 127
Norcross Bros. Co.'s Contribution to Washington Architecture, 147
Norton Co., 80, 241
Sales Conference, 50
Norton Grinding Co., 83
Novel Folder, A 22
Novel Plan, A 205
Object Lesson, An 68
O'Connell Real Estate Co., 178
Office of Public Roads, An 204
Old Colony District, The 205
Oldest Industry, The 193
One Thousand Members, 50
Pacific Coast Men Visit China, 261
Part Y. M. C. A. Plays in City's Life, 162
Pierce & Rice Oil Co., 55
Playground Movement, The Genius of the, 46
Playground in Worcester, The 101
Porch Shade Factory, 293
Portland's Second Opportunity, 288
Portland Wants Naval Station, 288
Portsmouth, to Advertise, 51
[illegible] & Lester Co., The 149
Powers, T. E., Co., 209
Present Conditions in Peoria, 223
Prosperity and the Railroad Men, The 103
[illegible] Wright S., 229
[illegible] Business by Automobile, 174
[illegible] Legislation, 188
Proposed Merger in New Haven, 307

Proposed Steamship Line, 201
Providence Convention, The 286
Provident Life & Trust Co., 183
Public Convenience, An Old-World Lesson in, 43
Publicity for Rockford, 234
Quality Work, 116
Railroad and Express Rates, 176
Railroad Development in Oregon, 261
Railway Trainmen's Conference, 29
Raising $10,000 for Playgrounds, 196
Robbins Machine Co., 115
Rockwood Sprinkler Co., 345
Royal Worcester Corset Co., 27
Russell, John May 174
Sacramento's Mayor Criticises, 198
St. Louis Objects, 193
Salem Plans Active Campaign, 202
Salt Lake City's Creed, 159
Salt Lake's Commercial Club, 159
School Conditions in the Heart of the Commonwealth, 57
Senator Bailey Our Guest, 72
Sensible Appeal, A 237
Shaper, New 319
Situation at Washington Square, 312
Smoke Damage, 205
Some Aspects of New England Agriculture, 295
Spasmodic Activity, 237
Spencer Wire Co., 28
Spirit of Co-operation and Enthusiasm, 318
Spokane, Wash., 64
Springfield Guarantee Fund, 4
Springfield in Line, 237
Sprinklers in Department Stores, 123
Standard Mfg. Co., 181
State Mutual Life Assurance Co., 67
Statistics Gathered by State, 204
Stevens Automatic Elevator Door and Gate Lock, 54
Stewart Automatic Sewing Awl, 116
Stockbridge Machine Co., 55
Study, A New 314
Tacoma to Worcester, 305
Tailbem Games at Fitton Field, 243
Tatnuck School, 65
Taking Account of Stock, 232
Taylor, Ransom C., 194
Texas and Worcester, 260
Thoughts on Business, 70
Three Old Worcester Books, 269
Town that Found Itself, The 13
Troy Women Organize, 34
Truly Augustan Month, 233
Truth About Rochester, The 107
Union Station and its Approaches, 99
Union Stations, Story of Our 3
Vessels at Annapolis, 237
Wachusett Mountain, 185
Walker Singlestroke Surface Grinder, 181
Waltham is Moving, 155
W. & S. Mfg. Co., 347
Ware's Health Shoe Tree, 54
Warren, J. L. & W. H. Co., 26
Watch Germany, 172
Water Competition in Danger, 311
Wells Chemical Bronze Co., 82
What Is a City For? 285
What Portland Spends, 125
What San Antonio is Doing, 221
What the Providence Meeting Means, 197
Where Scranton Lacks, 303
White Mountain Forest Reserve, 69
Whittall's, M. J., Mills, 23
Widening Influence of Worcester, The 140
Williamsport's Latest Enterprise, 291
Wire Goods Co., 24
Wood, P. W. Lumber Co., 150
Woodbury & Co., Inc., 87
Worcester—
And Atlanta, 284
Board of Trade—
Annual Banquet, 128
Annual Meeting, 133
Notes, 18, 48, 72, 106, 144, 175, 200, 236, 259, 290, 315, 342 237
Year Book, 208
Business Institute, 190
County Genius, 82
Elastic Stocking & Truss Co., 77, 239
Electric Light Co., 47
Interest in the Census, 69
In the Limelight, 208
Mailing Co., 258
Music Festival, 332
New Lighting and Power Plant, 15, 51, 70, 103, 142, 173, 198, 234, 257, 289, 313 44
Patents, 47
Polytechnic Institute, 21, 82, 242
Polytechnic Institute Grant, 98
Pressed Steel Co., 16, 51, 70, 104, 142, 199, 235, 256, 289, 313, 341 313
Quotations, 5
Telephone Bill 344
Trade Reports, 15, 51, 70, 103, 142, 173, 198, 234, 257, 288, 313 53
Trade School, 27
Warp Compressing Machine Co., 26
Wright, M. S. & Co., 323
Wright Wire Co.,
Wyman & Gordon Co.,
Young Lathe Milling Attachment,

ILLUSTRATIONS

An Old Advertisement, 207
Alsten & Goulding Co., 87
American Sash Trimmer, 211
Baldwin, D. A. & Co., 183
Bluew Press, The 269
Boston & Worcester Street Railway Co.'s Offices, 208
Bradley Car Co. Plant, 238
Bragg, Caleb, and his Fiat, 169
Branch of Peach Tree, 303
Broadway at 33d St., 225
Brosnihan Wrench, A 184
Brown, John, Bell 192
Buck, E. A. & Co. Plant, 184
Care of a Strawberry Field, 302
Case Shoe Co.'s "Royal Worcester Shoe," 88
Central Supply Co.'s Show Room, 114
Chase Patent Granite Saw (front and side view), 110
Chestnut Ave., 210
Church of St. John's, 251
Claflin-Sumner Coal Pockets, 293, 294
Concrete Mixing, 239
Construction Work, 241
Co-operative Advertising, 324
Copper Plate Illustration in Folio Bible, 274
Corset H Co.—
Cutting Room, 112
Entrance, 111
Factory, 25, 112
Form Room, 113
Main Office, 111
Private Office, 111
Shipping Room, 113
Stock Room, 113
Upper Pen Room, 113
Upper Stitching Room, 113
Crompton & Knowles Loom Works, 23
Crowd Leaving Dead Horse Hill, 170
Cup Won by Morgan Truck, 348
Curtis & Marble Machine Co., 28
Domestic Vacuum Sweeper, 292, 293
Eddy Razor Strop, 114
Fender Test with Dummy, 226
Generators at B. & W. Street Railway Co. Powerhouse, 206
Grant, Harry, Going up Hill in the Alco, 170
Graton & Knight Mfg. Co., 24
Heath, Melville E., Residence of 210
Higgins, R. H. Co. and Stearns Car, 148
Houston, Texas—
A Home, 213
Bird's-Eye View, 214
First National Bank Building, 213
Launch Club, 214
Howard Bros. Mfg. Co., 25
Howe Memorial, The 168
Hunt Truck, The 211
In Breckenridge Park, 223
Inscription on Redemption Rock, 186
Interior of Transformer Station, 326
Kansas City, Kan., 62
Kendall Lighting Fixture, A 348
Leland, W. H. & Co., 55
Lincoln Theatre, The 263
Loading Cotton, 216
Maine Apple Orchard, A 302
Maine Apple Tree, A 299
Marlboro—
City Hall, 191
Public Library, 191
Marsh, B. F., Office of 212
Massachusetts Strawberry Packing Shed, A 301
Mechanics Exposition—
Booths—
Central Supply Co., 83
Coghlin Electric Co., 79
Fowler & Co., 86
Kendall, W. D. Co., 84
Kidder, R. E., 84
Norton Co., 81
Norton Grinding Co., 81
Union Water Meter Co., 83
Wells Chemical Bronze Co., 85
Worcester Elastic Stocking & Truss Co., 86
Worcester Electric Light Co., 76
Worcester Pressed Steel Co., 78
Mechanics Hall Diagram, 41
Mechanics Hall During Exposition, 57
Washburn Hall Diagram, 43
Merchants' National Bank—
Exterior, 264
Interior, 265
Safe Deposit Vaults, 266
Merrifield Building, 267
Moderate Cost Houses, 276, 277, 278, 279, 280
Morgan Motor Trucks, 180
Multiple Compressing and Inspecting Spooler, 345
New England Corn Field, A 295
New England Corn Show—
Building, 329
Exhibits—
Bates, Theodore C., 331
Ross Bros. Co., 330
New England Motor Supply Co., 149
New England Telephone Index, 177
New Hampshire State Capitol and Entrance, 323
Nilo Meter, The 151
Norton Co.—
Directors, 319
Electric Furnaces, 322
First Works, 322
Loading and Firing a Kiln, 318
Men's Banquet, 53
Offices, 320, 321
Plants, opp. 241
One Thousand Ton Press, A 21
Pages from Hieroglyphick Bible, 273
Patio of the Pan American Republican Building, 147
Pay-as-You-Enter Car, New 226
Picking Time, 302
Plan of Streets Around New Union Station, 99
Playground Games, 243, 244, 245, 246
Porter Operating Table, 181
Post & Lester Co.'s Store, 149
Powers, F. E. Co., Office, 209
Public Service Commission's Electrical Laboratory, 227
Redemption Rock, 186
Representatives at Grand Rapids, 304, 305
Robbins Engine Lathe and Parts, 115
Royal Worcester Corset Co., 27

San Antonio—
Depot, 222
Public Buildings, 222
Spanish Missions, 223
View of 221
Sawyer, I. L., Residence of 210
School System Chart, 59
Second Crop of Clover, A 296
Sixteen Strawberries to a Standard Box, 297
Spencer Wire Co., 28
Stockbridge Shaper, 322
Subway Construction, 224
Summit House, 187
Fireplace, 187
Thomas Chap-Book, A 271
Towers Which Support the Wires, 326
Union Station (Old), 31
United States Ship Ohio, 91
Wachusett Mountain from the Lake, 185
Walker "One Stroke" Grinder, Figs. 1 and 2. 182
Warren, J. F. & W. H. Co., 26
Well-Loaded Apple Tree, A 297
White's Corner Station, 207
Whittall, M. J., Mills, 23
Wire Goods Co., 24
Wood, P. W. Lumber Co., 150
Worcester Manufacturing Plants Supplied with Power, 327
Worcester Pressed Steel Co., 242
Workers in a New England Strawberry Field, 300
Wright Wire Co., 27
Wyman & Gordon Co., 26
Y. M. C. A.
Baths, 163
Boat-House, 163
High School Group, 166
Officers, 162
Prescriptive Work, 163
Workshops, 164
Young Attachment, The 324

PORTRAITS.

Adams, Chas. P., 134
Alsten, J. A., 179
Angell, Emmet D., 246
Bartlett, Com. Charles W., 89
Booth, George F., 95, 245
Bosworth, Chas. H., 138
Brewer, N. Howard, 308
Brooks, George F., 1
Brown, R. W., 306
Brunell, Arthur B., 1
Buck, E. A., 184
Bullock, Alexander, 66
Campbell, H. F., 40
Carter, W. S., 29
Carter, D. William, 66
Chamberlain, Robert H., 195
Child, Albert M., 126
Clore, Leonard B., 247
Coates, George H., 1
Cooke, Frederick N., 1
Connette, Edward G., 224
Cotton, Clarence A., 306
Cutler, U. Waldo, 57
Davison, Herbert N., 136
Denny, Daniel E., 42, 134
Desoe, A. J., 30
Dolliver, Edward B., 229
Doyle, Martin N., 30
Dunn, E. Bruce, 138
Dunn, Willie, 35
Dunning, James E., 281
Durfee, Franklin B., 134
Dustan, Dana M., 138
Ellsworth, J. Lewis, 310
Floody, R. J., S.T.B., M.S., 36
Gage, Frank L., 193
Gannon, Thomas J., 1
Garritson, A. B., 29
Gates, Charles L., 283
Golbert, R. L., 209
Goodwin, S. Foster H., 134
Goulding, H. C., 179
Greenwood, Burt W., 310
Griffin, D.D., Rt. Rev. Monsignor, 249
Hewett, George F., 228
Hodgdon, W. O., 32
Holden, Prof. P. G., 218
Hurd, William D., 309
Hyde, W. Frances, 246
Inman, Albert H., 134
Jeppson, George N., 1
Kelley, Charles A., 1
King, Henry W., 283
Larkin, Timothy F., 189
Leach, Herbert N., 1
Lee, W. G., 29
Logan, James, 2, 129
Mackintire, George W., 66
Marble, Edwin T., 195
Marsh, B. F., 212
McMillan, Donald B., 7, 8
Mellen, Walter L., 1
Moore, J. Hampton, 94
Mosher, Frank P., 208
Norton, Charles H., 42, 319
Norton, F. B., 322
Orstrom, Charles A., 1
Paddock, Wallace A., 30
Prior, Wright S., 229
Sawyer, Herbert M., 189
Sevey, Glenn C., 309
Sprague, Gen. A. B. R., 160
Steele, John P., 193
Stewart, Minor, 213
Stone, W. S., 29
Stratton, Albert L. 137
Sullivan, Peter F., 1
Tatman, Chas. T., 133
Taylor, Ransom C., 194
Wadsworth, George R., 157
Walker, John, 129
Washburn, Chas. G., 130
Webb, George D., 109
Woodruff, Clinton Rogers, 63
Woodward, Edward M., 135
Woodward, George M., 216
Wright, Burton H., 66

The WORCESTER MAGAZINE Illustrated

Worcester School of Trades, Armory Square

JANUARY, 1910

$1.50 per year

Published by the Worcester Board of Trade

15 cents the copy

Central Supply Company

A visit to our warerooms will repay any intending purchaser

Telephone 4440

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

Foster, Commercial and Mercantile Streets Worcester, Mass.

THE WYMAN & GORDON CO.
DROP FORGED CRANK SHAFTS

USED IN
FAMOUS CARS
THE WORLD OVER

RELIABLE
STRONG AND TOUGH

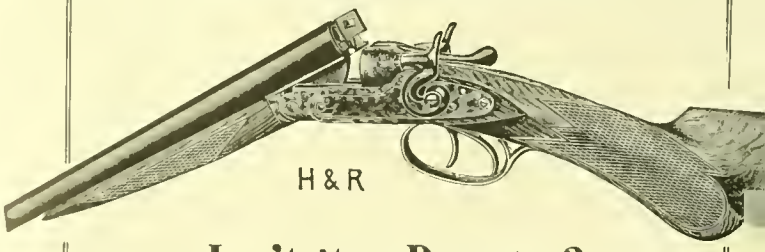
SHOPS
WORCESTER, MASS.
CLEVELAND, OHIO.
WRITE FOR ESTIMATES

TRADE

Established 1871 — **Incorporated 1888**

MARK

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 A.E. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. JANUARY, 1910 No. 1

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

PORTRAITS.
Board of Aldermen, 1910, 1
Donald B. McMillan as he Appeared on the Peary Polar Expedition, 7

GENERAL ARTICLES.
Administration of 1910, Mayor Logan's Recommendations, 2
Story of the Union Station, 3-4
Trade High School for Boys, Worcester's Experiment in Industrial Training, 5-6
Sketch of Mr. McMillan's Life and an Appreciation of His Achievement, 8
Worcester Exposition of 1910, 9
American Exposition at Berlin this Year, 10
From a Japanese Standpoint, an Answer to Congressman McKinlay, 11
The East Organizing.—Charles T. Tatman, 12

EDITORIAL, 13-14
The Town That Found Itself,
Factory Sites,
The Elevating Influence of Artistic Printing,

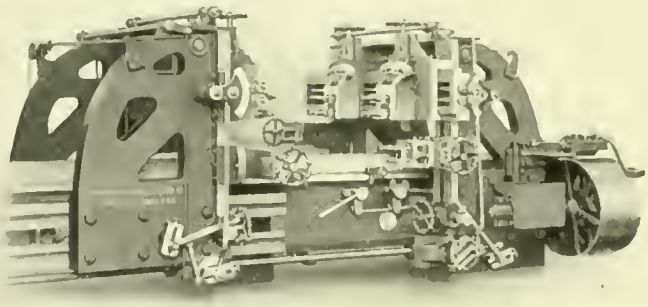
DEPARTMENTS.
The Failures of a Year, 15
Worcester Patents, 15
Worcester Quotations, 16

CURRENT EVENTS, 16

BOARD OF TRADE COMMENT.
One Month in the Life of the Board, 18
The Corn Show of 1910. What it Means to Worcester, 19
Business Office Patriotism, 18-20

INDUSTRIAL NEWS, 21-28

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents, Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden-A 3, Germany and Austria.

We Manufacture

Cylinder Grinders
Piston Ring Grinders
Internal Grinders, Drill Grinders
Sash Trimmers
Emery Wheel Dressers

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Coates Flexible Shaft

Will stand all kinds of abuse. Can be twisted and turned in any way without interfering with the tool or business end.

Place the motor on the floor, take your two pound breast drill and "DRILL." On account of its portability and great utility in inaccessible places and tight corners, the Coates Outfit turns many puzzling time-consuming jobs into simple propositions.

Learn More About It

Send for book W

COATES CLIPPER MFG. CO.
Worcester, Mass.

WOODBURY & COMPANY
INCORPORATED
ARTISTS ENGRAVERS
ART PRINTERS
No. *Four Walnut St.* WORCESTER MASS.

ORIGINAL DESIGNS
BIRDS-EYE VIEWS
HALFTONE ENGRAVINGS
COMMERCIAL PHOTOGRAPHY
We Photograph
Machinery, Views, and Manufactured Products
PHOTOGRAPHIC ENLARGEMENTS
ANY SIZE
ART PRINTING
BY OUR NEW
LUXOGRAVURE PROCESS
BUSINESS ANNOUNCEMENTS, CATALOGUES
CARDS, WEDDING INVITATIONS, MENUS
A MOST COMPLETE ENGRAVING AND ILLUSTRATING PLANT

Catalogue No. 6

¶We want our Catalogue to be in the hands of every buyer of Hardware, House Furnishing Goods and Wire Specialties.

¶It describes over 4,400 articles made from Wire, which we keep in stock ready for immediate shipment.

268 pages, 8¼″ x 11½″

Three Sections

1 Wire Hardware
2 Kitchen Wire Hardware
3 Wire Specialties

A postal will start a copy your way express prepaid

The Wire Goods Company
Worcester, Massachusetts, U.S.A.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

The WORCESTER MAGAZINE

George F. Brooks
Ward 10

Charles A. Obstrom
Ward 6

Frederick N. Cooke
Ward 7

Walter L. Mullen
Ward 8

Herbert N. Leach
Ward 2

A. B. Brunell
Alderman-at-Large

George N. Jepson
Ward 1, President

Charles A. Kelley
Ward 4

George H. Coates
Ward 9

Thomas J. Gannon
Ward 5

Peter F. Sullivan
Ward 3

Board of Aldermen—1910

The Administration of 1910

Mayor Logan, Inducted into Office, Shows an Increase in Valuation in Worcester During 1909 of Over $5,000,000. His Plans for the Future

HIS Honor Mayor James Logan and the new city government for 1910 were inducted into office Jan. 3, the day being overcast, but a throng, in spite of the weather, gathering in Horticultural Hall, where the exercises were held, to listen to the Mayor's third inaugural.

The document was a characteristically broad-gauge and statesmanlike paper, in which Mr. Logan gave a faithful account of his stewardship up to this time, and outlined in an intelligible and very interesting manner his plans for the future.

Every citizen of Worcester, and every one interested in her welfare outside, will be glad to know the substantial gain in valuation made by her during 1909, as shown by His Honor, who reported that on Dec. 1, 1909, the total valuation of the city had reached $134,451,902.

This shows a net gain for the year of $5,128,476, as follows:

Gain on real estate,	$2,264,400.00
Gain on personal property,	2,864,076.00
Total,	$5,128,476.00

In this connection, on the subject of tax dodging Mr. Logan speaks out with no uncertain voice and in a way that will be appreciated by mayors and boards of assessment elsewhere. He declared:

"Real estate can be seen by the assessors, but personal property, represented by stocks, bonds, etc., is in the strong box and cannot be seen, and thus personal property and the income of the professional man evade their just proportion of taxation. In saying this I am conscious that I am not stating anything new, but am simply stating a well-known fact.

HON. JAMES LOGAN, Mayor

"I submit, herewith, a table showing the valuations of real estate and personal property each year for the past ten years, and it is an instructive exhibit:

ASSESSED VALUATION OF CITY OF WORCESTER.

1900-1909.

Year.	Real Estate.	Personal Estate.	Totals.
1900.	$86,158,600	$25,885,373	$112,043,973
1901.	88,054,200	26,223,935	114,278,135
1902.	90,140,650	26,068,365	116,209,015
1903.	92,358,300	25,583,281	117,941,581
1904.	94,087,100	25,261,002	119,348,102
1905.	95,669,850	25,195,652	120,865,502
1906.	97,461,400	25,765,101	123,226,501
1907.	99,568,150	25,179,138	124,747,588
1908.	103,703,650	25,619,776	129,323,426
1909	105,968,050	28,483,852	134,451,902

"I am probably well inside the truth in saying that there has been more personal property created through stocks and bonds during the past ten years than during the preceding fifty years combined, and while real estate valuations have, during the past ten years from 1900 to 1909 inclusive, increased from $86,158,600 to $105,968,050, or 25 per cent., personal property has only increased from $25,885,373 to $28,483,852, an aggregate increase of only $2,598,579, or 10 per cent. during the same ten years; and almost all of that increase was made last year, and almost a million of the increase was the result of the inheritance tax law of 1907, which provides that 'an inventory and appraisal under oath of every estate shall be filed in the Probate Court, or with the Tax Commissioner, by the executor, administrator, or trustee within three months after his appointment.'"

Commenting further on this fact the Mayor remarks:

"The increase in real estate valuations in 1909 is the largest in the history of this city, with the exception of 1908, and the single item which made the 1908 valuation higher than 1909 was the Slater Block on Main Street, which was completed that year.

"The increased valuation in 1909 was not made by increasing the valuation of land or existing buildings, the increase on buildings already erected being only $368,300, and the increase on land value only $135,800, while the net increase on new buildings alone during 1909 was $1,688,750.

"There has been a larger gain on the assessed valuation of personal property in 1909 than has been shown in any previous five years combined, with the single exception of the year 1899, when the stock of the Washburn & Moen Manufacturing Company was acquired by the American Steel & Wire Company. In the change from one corporation to another the city received a large addition in the valuation of personal property represented by the new securities."

The Mayor paid a high tribute to Dr. M. G. Overlock for the work he has done in furthering the campaign against tuberculosis, through the medium of the Manufacturers and Merchants' Agreement, and intimated that he should ask the city government at no distant date to make an appropriation for a municipal hospital for the benefit of those suffering from this disease. He expressed his approval of the proposition to establish branches of the Free Public Library, and stated that the necessary means would be forthcoming for their erection when their sites were decided upon; he endorsed the new Worcester School of Trades; he expressed himself as unalterably in favor of a limited franchise for a trolley express if such a privilege is granted the Consolidated Street Railway; he voiced his determination to secure better rates for light and power from the Worcester Electric Light Company, and pledged himself, now that the city has gone license, to make Worcester the best license city in the world.

The Story of Our Union Stations

One Now Being Demolished Cost $800,000, and it was Thought when Built it Would Last a Century. Its Predecessors

By J. Brainerd Hall

THE first passenger railroad terminal, or station, in Worcester was that of the Boston & Worcester Railroad, on Foster Street near Main, and located partly on the site of the present Worcester Bank Block and the home of the Worcester Board of Trade. It was a two-story building, 40 by 100 feet, and built in 1835.

In 1839 a long one-story building was erected along near what is now the east side of Norwich Street; it was over 100 feet long, and the south end was near what is now the front of the telephone building on Mechanic Street. At the same time the Foster Street station was moved northeasterly to the north end of the Norwich Street building; this brought the front entrance on Foster Street nearly opposite what is now Waldo Street; at the east end a long ell was added.

This removal and additions gave Worcester its first Union Passenger Station, with a frontage on Foster Street of 250 feet and on Norwich Street of 285 feet. The ticket office, waiting-rooms, and a very large refreshment room occupied nearly all of the first floor of what was the original station and a part of the north end of the Norwich Street or south ell; the second floor of the original station was a tenement.

The Foster Street, or east ell, was first used by the Boston & Worcester road, and the Norwich Street, or south ell, by the Norwich & Worcester road as train sheds; later on, the station was used jointly by each of the seven railroads as they were built to or from Worcester, and all continued to use it with the exception of the Providence & Worcester and western roads until it was abandoned for railroad purposes.

When the Foster Street station was built, a bell was placed in a tree at the corner of Main and Foster Sts. and used to inform the public that a train was soon to be started for Boston. When the Union Station was built, it was placed in the bell tower on the main building; as I remember it, the bell was rung fifteen minutes before the time to start the 7 a.m. train for Boston. It was also used as a fire alarm bell.

This brief would be far from complete if I made no reference to Lincoln Square and the suburban station there. Around Lincoln Square clusters much that is of historical interest. It was the northern boundary of the central settlement recommended by the general survey of 1683, Park Street and the Common being the southern. Until the floating bridge was built at what is now the Causeway at Lake Quinsigamond, Lincoln Street, via Lincoln Square, was the main outlet for communication with the eastern part of the State.

At Lincoln Square, in its earlier history, was the Jail Tavern and the Lincoln Square Hotel; just north of the square on the west side of Lincoln Street was the Brown & Butman Tavern, earlier known as the "Hancock Arms," and the headquarters of the Revolutionary patriots.

In front of the Antiquarian Library is a tablet telling one of the schoolhouse located there, and of John Adams, the schoolmaster, later the second President of the United States. Across the street, at the corner of Lincoln Square, a tablet on the front of the block tells one where was located the Timothy Bigelow mansion, and of his service as Colonel of the 15th Regiment of Massachusetts in the Continental Army, while on the Common, at the southern extremity of what was in his day almost the whole of Worcester, is a monument to his memory as a soldier and patriot.

Levi Lincoln, Jr., lived at Lincoln Square until about 1811, when he moved into the Lincoln mansion he had just built on Main Street, between Elm and Maple Streets, and where the Lincoln House block now is; from 1825 to 1834 he was Governor of Massachusetts. At the time Governor Lincoln was elected the first Mayor of Worcester, he lived in his new mansion on the north side of Elm Street, now the residence of his grandson, Waldo Lincoln, son of D. Waldo Lincoln, mayor of Worcester, 1863-64.

Between Salisbury and Prescott Streets still stands the mansion—at present occupied by the Hancock Club—built in 1770 by Stephen Salisbury the 1st. It was later occupied by Stephen Salisbury the 2d until 1836, when he built the mansion on the west side of Highland Street opposite Harvard Street. After his death it was occupied by Stephen Salisbury the 3d and last of the Worcester line of Salisbury, and now, by his will, the property of the Worcester Art Museum.

Between what is now Prescott Street and the westerly side of Lincoln Street was located the trading store of Stephen Salisbury the 1st, just east of which stood the first building in the county constructed for a jail only, and used as such until September, 1788, when a new jail, three stories high and 32 by 64 feet on the south side of the square, was completed. The sides of that jail were rough stone from Millstone Hill. At that time it was the second stone building of any size in the State; the other was King's Chapel, which still stands where built, at the corner of Tremont and School Streets, Boston.

"The jail is a massive granite structure * * * * Without some convulsion of nature, it is not possible that it will need any repairs, except the roof, for two or three centuries," writes Isaiah Thomas; yet thirty-one years later that massive structure was found to be inadequate for prison purposes, and the beginning of what is now the Jail and House of Correction was started on Prospect Street, near Summer; later the granite building at Lincoln Square was taken down and a part of it used to build a granite block on the north side of Front Street and the west bank of the Blackstone Canal. There are many still living who will remember it on the west side of the viaduct as the antique book store and steamship office of the late Richard O'Flynn.

It was through the influence of Stephen Salisbury the 2d, and an agreement he insisted upon when he disposed of land in that vicinity for railroad purposes, that the Lincoln Square passenger station was established, and has not since been discontinued.

The station originally was upon a part of the site of the trading store of Salisbury the 1st, the first Lincoln Square jail, and nearly up to what is now the north side of Lincoln Square. It was moved back to its present location when the Nashua Railroad was double-tracked to Clinton.

By this brief résumé of origin and opening up of railroad transportation lines to, from and through Worcester, one readily recognizes the insufficiency and defective-

ness of the Foster Street Union Station; that much time was consumed in making connections by transfer across the city; the Foster Street Station had become an old-timer; there was no room to modernize, and a growing demand that Front Street should be relieved of a dangerous railroad crossing and the tracks removed from the Common,—all these were important factors demanding a Union Station in fact, and so located that it should be used by all the railroads.

At that time the east side of Washington Square appeared to be the most available location, with but one building not used for railroad purposes in the way, and that, the Washington Square Hotel, kept by Elliott Swan, was upon railroad land. The hotel, which had been a very prominent landmark for a half century, was taken for railroad purposes in 1872.

My first assignment, when I joined the editorial staff of the Worcester Gazette in September, 1873, was to describe from time to time the changes in and around Washington Square, and the progress of the construction there of a union passenger station.

After my enforced retirement from active business, the outcome of army life, I began in October, 1889, a series of papers largely biographical in character. Turning back to one of them, devoted almost wholly to Worcester landmarks, I find the following:

The Union Passenger Station at Washington Square covers about four acres; the excavations for the foundation began in June, 1873; the material for the building is largely rough-faced granite blocks and iron; its width is 250 feet; its length, exclusive of the curved extension of northerly half of the front, is 450 feet, built in two sections, running east and west; over each section is a hip-roof sloping to the north and south, and between these two roofs is a third hip roof sloping to the east and west. The southerly section has an arch at each end wide enough for seven tracks; the northerly section has a similar arch at the east end, and at the west end on the north side are two small arches, each only wide enough for a single track; a description of one of the three large arches will answer for them all.

The west arch consists of seventy-two blocks; the keystone weighs 7866 pounds, while the total weight of the blocks composing the arch is 170 tons; the capstones to the stone work over the arches are 86 feet from the ground; the sides of the building are 33 feet high, except on the north side, where the two archways are built, which are, on that account, a few feet higher. The inside buttresses to the west arch consist of two large blocks of granite cut to represent winged lions sitting on their haunches. The base is 6 feet square; the height from the base to the top of the crown is 9 feet. The capstone on the tower is 159½ feet from the ground; above this rises a wooden extension covered with slate, 10 feet in height, surmounted with a rod and vane of 13 feet, making a total height of 212½ feet.

In the construction of the stone work of the building and tower there were used 600,000 brick, 12,000 tons of stone and 3000 barrels of lime and cement. The two roofs are surmounted with ventilators running the entire length of each. On top of each is an ornamental iron railing, while over the top of each arch is a large vane. The roofs of the ventilators are covered with 7200 panes of glass 12 by 34 inches, set in 360 sashes. Some idea of this immense structure can be formed when it is known that it required 200,000 feet of boards to cover the roof, that more than 30 tons of nails were used, and the painters and glaziers used more than 7 tons of white lead, 3 tons of putty and 1 ton of yellow lead, and ½ ton of red lead.

The second Worcester Union Passenger Station was formally opened for business June 1, 1875, but it was not until the summer of 1876 that the last road abandoned the Foster Street Union Station. Excepting the Asylum at the Lake, this second Union Station was at that time the largest and most expensive building in Worcester.

In the 1888 issue of "Worcester: its Past and Present," published by O. B. Wood, one finds that "the Union Passenger Station on Washington Square was built by the Boston & Albany Railroad Company in 1874-75, at a cost of $800,000; a complete and elegant structure capable of accommodating the travel in and out of Worcester for a century at least."

Twenty-one years later we see that capable station condemned and abandoned on the ground that it is insufficient to meet the demands of the traveling public in and out of Worcester.

How Springfield Does it

The New Enterprise Committee of the Springfield Board of Trade has had drawn up a printed schedule for the use of corporations applying for assistance to that body. The schedule is exhaustive in detail and shows not only the assets and liabilities of the corporation, but when it was organized, by what state it was chartered, the authorized capital stock, number of shares issued and outstanding, and the assets for which the stock was issued. The number of years the company has been in business must also be set forth, its total sales during the last fiscal period, its gross and net profit, or loss, and operating expenses. The number of employees is also shown, both men and women, and the estimated number of employees under the new condition. The reasons for desiring to locate in Springfield must also be declared, together with the amount of additional capital desired and the way it is proposed to set about getting it. The addresses of all officers and stockholders must be given and the amount of stock they severally own. In conclusion, the whole document must be sworn to.

The Situation in Lowell

At the last meeting of the Lowell Board of Trade J. A. Hunnewell read an exhaustive report for the finance committee, which dealt with the methods of collecting dues, recommended a business-like method of keeping accounts, the payment of sufficient salary of the secretary to keep him constantly employed, the going out to bring in new industries instead of waiting for them to come, and the amalgamation with the Board of Trade of the energy recently exhibited by the committee of three hundred business and professional men working for a common purpose. It is said that the board has no less than fifty members who owe the organization $400 in dues.

The Embassy Problem Discussed

Representatives of the American Embassy Association recently addressed the Richmond, Va., Chamber of Commerce. It is the purpose of this association to induce the government to purchase and maintain permanent homes for American ambassadors at foreign capitals.

A Trade High School for Boys

Worcester About to Prove to the World that Industrial Training is Taught in Massachusetts, Reports to the Contrary Notwithstanding

AT the fourteenth annual convention of the National Association of Manufacturers held in New York city May 17, 18 and 19 last, there was a very long report submitted on the subject of industrial education, and it closed with the following remarkable statement: "We are just in receipt of a letter from Mr. George B. Hugo of Boston, Mass., dated 3d inst., in which this language is used, namely: 'It seems to be a difficult task to find out just what Massachusetts has accomplished in this line. As to establishing day trade schools, they have not accomplished anything, and will not, I believe, being too much in awe of trade unionism.'"

The answer to this statement can be found in the new Worcester School of Trades, a picture of whose building adorns the front cover of this Magazine. So far from being in awe of trade unionism, the fact that Worcester possesses this school is very largely due to the initiative co-operation and interest of the workmen of Worcester, and nobody will rejoice more at its completion than they.

The statement credited to Mr. Hugo may and may not apply to the splendid textile school at Lowell and to the very practical and interesting work being accomplished at Fitchburg. Those cities, if they have been misrepresented, can defend themselves perhaps more ably than we, for they possess more light on the subject.

But certainly, if this reproach has been justly laid at her door in the past, Worcester will not much longer plead guilty to such an indictment. She has undertaken in the most practical possible way to furnish industrial training for her young men, and before another convention of the Manufacturers' Association is held she ought to be in a position thoroughly to refute any such statement as appears above.

As an evidence of what is being attempted here, perhaps we might cite the equipment that is being installed in this new school. It includes the following machinery: Prentiss Tool & Supply Co., 30-inch Cincinnati planer; W. A. Buxton Machinery Co., grinder; Norton Grinding Co., tool grinder and plain grinder; Francis Reed Co., drill; Chicago Flexible Shaft Co., gas forge; Washburn Shops, speed lathes and drill grinder; Robbins Machine Co., wood lathe; R. E. Kidder, two saw benches and hand saw; Hobbs Manufacturing Co., pony planer and buzz planer; Stockbridge Machine Co., shaper; Stark Tool Co., bench lathe; H. G. Barr, drill; F. E. Reed Co., six 16-inch lathes, one 20-inch lathe and two hand lathes; Brown & Sharpe Manufacturing Co., three milling machines, one milling attachment, one universal grinder, one gear cutter; Whitcomb-Blaisdell Machine Tool Co., one 18-inch lathe, one 24-inch planer; Jones & Lamson Machine Co., one 2-foot 24 flat turret; Prentice Brothers Co., one 16-inch lathe, one drill; J. E. Snyder & Son, drill; Hendey Machine Co., 14-inch lathe; Woodward & Powell Planer Co., 24-inch planer; Pratt & Whitney Co., gauges, centering machine; Duncan & Goodell Co., three dozen vises, small tools; Washburn Shops, bench legs; Holyoke Machine Co., shafting; W. A. Buxton Machinery Co., one Espen-Lucas cold saw.

If the boys in the Worcester School of Trades are taught to master these machines, as they will be, it is not probable that this State will long lie under the imputation of not having accomplished anything in the direction of establishing day trade schools.

Furthermore, the faculty that will be in charge of this school will be composed exclusively of practical men, men who have worked their way up from the ranks, who have handled and solved shop problems all their lives, and who are perfectly capable of imparting their knowledge to others.

The shop under construction and now nearly completed is of brick, three stories in height, 12x210 feet, with an administration building in front 50x57 feet, four stories high. The total floor area will be some 37,000 square feet.

Liberal accommodations have been provided for 200 pupils, which number is expected to be reached in the very near future. It is planned to admit a comparatively small number of boys at a time at the start, in order that the shop shall not be clogged with entirely green boys at the beginning.

A description of the building itself may not prove uninteresting to the very large number of people outside of Worcester who are interested in the industrial experiment we are working out here.

The ground floor is level with the grade of Prescott Street, on the east end, and level with the yard, on the south side. It is three feet below the grade of Grove Street, and this fact has been utilized to group the coat-rooms, wash-rooms, toilet-rooms and the ventilating plant at that end of the structure. The power plant and forge shop are concentrated at the east end. The remaining space of 6000 square feet is left for the machine shop. Provision is made for two elevators, one for freight next to the power plant, with an outside loading platform, and one next to the head-house for passengers.

This ground floor machine shop will have a tar-concrete floor, with hemlock plank bedded in and covered with maple flooring. The posts are ten feet apart, centre to centre, and the windows, which run to the floor planking between the overhead beams, are seven feet wide, with three feet of brickwork between. The grade of Concord Street required all windows on this floor to be three feet six inches above the floor, but they reach so high, and the shop is so narrow that the room is very well lighted. The power plant is to consist of a 90 horse-power Stewart vertical boiler, furnishing steam at 150 pounds pressure, to an 80 horse-power Westinghouse compound engine, which in turn is direct connected to a 55 kilowatt three-phase generator, furnishing current for both light and power at 220 volts.

The exhaust steam from the engine is to be utilized for heating the building by means of steam heating, including a vacuum pump, oil separator, 100 horse-power feed-water heater. A portion of the steam will also be used to heat the water for the wash-rooms.

The current from the generator is to be carried to a slate switchboard in the engine-room, and there divided between a power current and three lighting circuits, each of the latter being single-phase.

The power current will be distributed to four motors, one of 5 horse-power to drive the ventilating fan, one of 5 horse-power to drive the machinery on the ground floor, one of 35 horse-power on the first floor, and one of

20 horse-power on the second floor. These motors are to be arranged so that each can be run from the school's own plant, or from the current furnished by the Worcester Electric Light Company.

The lighting system can also be instantly switched from the school plant to that of the electric company, thus making a flexible system and providing for any future extension of the building.

The forge shop is 22 x 40 feet, thus affording room for considerable future enlargement of the shops. A gas-hardening, tempering and annealing plant and sufficient forges to take care of present requirements for tool dressing, etc., will be put in at once. The second floor of the machine shop is the same size as that below. The power plant extends up through this floor, and over the forge shop is a molding-room for the present use of boys trying out the patterns which they may have made on the floor above.

Provision is made for an office for the manager, though for the present the officers of the school will use one of the recitation-rooms for administrative purposes.

On the second and third floors six recitation-rooms are provided, all of small size, but capable of accommodating 150 boys at once. On the second floor, also, is the main entrance to the building from Grove Street or Armory Square.

The top floor is left open from end to end for a wood-working shop. A second wash-room may be provided on this floor, as the growth of the school may require. The fourth floor extends only over the area of the head-house.

If further additions to the plant are made, this floor may be cut up into three recitation-rooms similar to those on the floors below, but for some time it will probably be used for a drafting-room, and consequently the space which on the lower floors is given over to teachers' rooms and janitors' closets is here allotted to a blue-print room.

There has been expended on the school so far in building and equipment $67,473.03, an amount which compares very favorably with the sum that it would be necessary to spend on a modern high school building in the same state of completion in which boys were going to study theory instead of practice.

The President of the commission having the school in charge, and the man to whom no small credit is due for his untiring and patriotic labors in behalf of industrial education here and elsewhere, is Milton P. Higgins. Mr. Higgins has been fortunate in being surrounded by a body of men scarcely less zealous than himself, who have given of their time and energy unstintedly, in order that Worcester might possess this model school. The Building Committee comprised Milton P. Higgins, John M. Buckley, George I. Alden, George F. Brooks, George N. Jeppson and Levi L. Conant; the Finance Committee, Charles F. Marble, Cornelius J. Carmody and Milton P. Higgins; the Committee on Curriculum, Levi L. Conant, George I. Alden and George F. Brooks, and the Committee on Equipment, John R. Back, John P. Casey and Milton P. Higgins.

The lot fronts on Grove, Concord and Prescott Streets, contains 66,000 square feet, and has two spur-tracks of the Boston & Maine Railroad laid upon it.

The school opens Feb. 1 with about fifty pupils, twenty-five of whom will be placed in the iron-working section and twenty-five in the wood-working section. Twenty-five pupils will be admitted every three months thereafter until the full capacity of the school, some 200 pupils, is reached.

The larger portion of the pupils will be assigned to the iron-working departments. Only once a year will the twenty-five new pupils joining be assigned to the wood-working division. At first courses will be offered in the machinists', pattern-makers' and cabinet-makers' trades.

Only boys over fourteen years of age can be admitted, and the course of study will be four years. It is the evident desire of the faculty to do the same amount of transforming work in that period that is done in the ordinary industrial establishment when a boy is taken on as an apprentice and turned out a journeyman. In order to do that each pupil will work under the personal guidance and supervision of a teacher who is a skilled mechanic.

Students will be required to attend regularly from 8 to 12 and 1 to 5 daily, Saturday afternoons excepted.

It is too early yet to go into detail as to the practicality and merit of the plans proposed for this school further than to say that as far as humanly possible the instructors in this school will subordinate theory to practice. A boy will be taught not only how to run a machine, but how to strip it and to reassemble it. He will be shown not only how to make something and to make it perfectly, but how to make it economically. He will be taught not only how to start and stop a machine, but he will be shown how to repair the machine when it breaks down. He will be taught not only how to discover what ails his tools when they work badly, but how to repair them so they will work well. He will not be taught the geometrical triumphs of Pythagoras and the logical problems of Euclid, excellent as they may be, so much as he will be the applied mathematics' of shop practice, the problems that he will have to meet and grapple with and solve in after life.

In this respect this school will stand absolutely unique in industrial education in America. Other schools have tried it, notably one well-known western institution, but none have laid such stress on practice and relegated quite so far to the rear pure theory.

It is an old adage that by their fruits ye shall know them, and the Worcester Magazine will hope at no distant date to present in detail the story of the achievements of this model institution from perhaps a worthier and better-informed pen, illustrated by photographs taken in the shop, showing precisely the conditions under which the boys are working and what they have produced under those conditions.

Free Space at Buenos Ayres

Hon. G. H. Sherrill, American Minister at Buenos Ayres, has announced, as a result of a conference with the Minister of Agriculture of the Argentine Republic, that free space has been allotted in the exposition there next year for the exhibits not only of agricultural machinery, but of machinery of all kinds.

Framingham's New Factory

Framingham expects to dedicate its new factory Jan. 20th, and the Framingham Board of Trade is planning to make the affair a gala occasion. The shop will be in operation from 6 to 7 p.m. to afford the public an opportunity to see how shoes are made; this will be followed by the dedicatory exercises, the whole to conclude with a dance in the building.

Donald B. McMillan in the Furs He Wore 'Mid Arctic Snows.

Donald B. McMillan; Gentleman, Scholar, Explorer

A Citizen of Worcester, who in his Youth has Helped Perform a Memorable Task, and Added by his Manliness, Modesty and Self-Control a New Dignity to the Achievement and a New Lustre to the Heart of the Commonwealth

THE Worcester Magazine takes a pardonable pride in presenting to its readers this month two splendid illustrations, made from photographs from the studio of Schervee & Bushong, of the gentleman who is perhaps to-day Worcester's most distinguished citizen—Prof. Donald B. McMillan, Commander Peary's companion on his recent successful expedition to the North Pole.

We are particularly glad to be able to present these pictures, one of them taken in the furs worn by Professor McMillan amid the Arctic snows, because of the fact that it is improbable that he will ever teach in Worcester again.

He has, it is true, a two-years' leave of absence from the Academy, and may, if he desires it, return here. Indeed, Dr. Abercrombie has the first claim on his services, but it is doubtful if he ever does any more teaching anywhere.

He has already entered upon a lecturing tour of forty nights, which will take him well up into next June, and after that it is quite probable that he will devote his life to scientific exploration work.

It is true that there is no longer any reason for the sacrifice of men or money in order to solve the long mystery of the North Pole, but the South Pole has so far successfully resisted attack, and it is Commander Peary's desire that an attempt to conquer it should be made by his personnel on the North Polar expedition, and under his personal supervision, if not accompanied by him in person. Under the circumstances, Professor McMillan feels that there is a work for him to do in that quarter of the globe, scarcely less important than that he has already performed.

The contribution to the scientific world made by Professor McMillan, as a result of his polar trip along ethnological, botanical, zoölogical and other lines, was not inconsiderable, and his friends in high quarters are looking forward to a most brilliant career for him as a result of his discoveries in those vast, silent, unexplored waste places south of Tierra del Fuego.

Speaking of him, Prof. Clifton A. Towle, a classmate of his, and a just as well as loving friend, recently wrote:

"Donald B. McMillan loves the sea and all that concerns it. He enjoys sailing a small boat in a stiff breeze more than any other sport, and if there is a bit of danger in it, all the better. He would rather taste the salt spray swept into his face from the crest of some wave which he is plowing through than sit down to an elaborate feast. This love of the sea was born in him, for his father and grandfather were old Scotch sailing masters. Love of adventure, too, was his inheritance. In boyhood he was the most daring of all the lads in Provincetown, and this venturesome spirit drove him later, in college, to the top of King's Chapel spire, hand over hand, on the lightning-rod, to remove a flag which had been raised in derision of his class.

Prof. Donald B. McMillan

"It has been Mr. McMillan's fondest hope, ever since he was old enough to read and understand books on polar exploration, that some day he might be a member of an expedition to the North Pole. In his library at Worcester Academy he has all the obtainable books on Arctic work and he knows them well enough, too, to tell the contents of each in much detail. The enthusiasm with which he joined Commander Peary's party in June, 1908, was wonderful to see.

"On account of Mr. McMillan's ability as a sailor and navigator, and on account of his love of the sea, the position of first officer aboard large schooners has several times been offered him. He possesses medals and diplomas given him as rewards for risking his life in saving drowning persons.

At Worcester Academy Mr. McMillan is the idol of all students. They admire him because he "does things" as boys would like to do them. He takes the lead in the work and play of the boys who come most intimately in contact with him. Enthusiasm, patience, fun, grit, loyalty and reverence are some of the prominent qualities which make Mr. McMillan a friend of all whom he knows, man or boy. It would not be accurate to leave out of an account of his personality the fact that he is a noble example of the highest type of simple Christian

manhood. The golden rule is his motto, and selfishness was altogether left out of his make-up. Words similar to Commander Peary's praise of him are always spoken by those who know him.

"Provincetown, Mass., a city of sailors, is Mr. McMillan's birthplace, and seafaring people were his ancestors. He is thirty-four years old. Captain Neil McMillan kissed his son Donald one morning something over twenty-five years ago and set sail for the north. Since that time nothing has been heard from his vessel or crew. Donald—or Don, as his playmates called him—had to work to help support the large family which was left behind, but he managed to go to school and to prepare for college, an uncommon thing for boys of his time in Provincetown to do. Sixteen years after Commander Peary graduated from Bowdoin College, Mr. McMillan entered the same institution. The words "trained athlete" are fit for him, for the spirit which characterizes his whole boyhood made him a member of the football and track teams of his college, and he has been an athlete and a teacher of athletics ever since then. Typhoid fever caused him to drop back a year in college, and he graduated in 1898 from Bowdoin. He taught in the high school as principal in Gorham, Me.; then in the Swarthmore Preparatory School at Swarthmore, Pa., and since then he has been physical director in Worcester Academy, Worcester, Mass."

No appreciation of Donald B. McMillan would be complete without a tribute to his modesty and self-control. Both are equally apparent, and each has made for him, during the trying months since he has returned to us from the frozen North, hosts of new friends. The incentive to speak out while there was a chance that the honors so justly due Mr. Peary should be elsewhere bestowed, must have been very great, but through it all Mr. McMillan conducted himself like the thorough gentleman we all believe him to be, and he added new honor during these weeks, not only to his own name, but to the splendid task he had helped perform.

Worcester Exposition of 1910

Splendid Success of Last Year Due to be Repeated by Mechanics Association Next Month

The success of the Mechanical and Electrical Exposition, promoted by the Worcester County Mechanics Association in March, 1909, and the almost unlooked-for new business secured by many of the exhibitors, are still clear in the minds of the manufacturers, and many have taken space in the next Mechanical, Electrical and Textile Exposition which is to be holden Feb. 5 to 12, 1910.

The success of the last exposition brought to the attention of those who had the interests of Worcester County at heart the fact that the Worcester County Mechanics Association had a mission to perform in giving publicity to the facilities possessed by Worcester County manufacturers, and to the value of their products.

As in all work of this kind, a leader was necessary; a man who saw the need and then dared to push the venture. Such a leader appeared when Daniel E. Denny was elected President of the Association. Immediately he began a campaign that has resulted in a great gain of membership; a reduction of the debt of the Association, and more valuable than all, a thorough knowledge—widespread and accurate—of the importance of Worcester County's industries as compared with other sections of the county. His activity has had the desired effect, and there is little doubt that the enterprise shown by the President will be followed in many ways by the officers who may succeed him in the years to come.

The results obtained by the last exposition have deep significance. They mark an awakening of the over-strong conservatism of the manufacturers, and of a desire to work together for their own and Worcester's welfare. It was stated after the last Exposition that it would be almost impossible to better the results or improve the Exposition, but those who have the matter in charge, the Exposition Committee and the officers, think there is no such thing as standing still, and have planned and worked out an Exposition this year that will be a business bringer and is entitled to the hearty support of every business man of Worcester County.

A large amount of business with other states than Massachusetts was secured by a number of the exhibitors at the last Exposition. This far-reaching effect was not foreseen by the exhibitors themselves, and was a very pleasing result; so pleasing, in fact, that some of the exhibitors wish to double their space at the coming Exposition.

Few realized how this was accomplished. In the first place the Exposition Committee had reading articles, relating to the proposed exhibition, inserted in many trade papers in New York, Philadelphia and Chicago, besides the work done by the Worcester Magazine. These articles were seen by those interested in goods, such as Worcester County manufactures, and evidently their buyers and traveling men in this section were instructed to attend the Exposition and see what had happened to awaken Worcester, and find out what it was that Worcester had in manufactured goods and machinery that could not be obtained elsewhere.

The result was recommendations to the home office, orders and reorders. Some of the exhibitors have secured regular customers, who will probably buy of them for years to come, and thus the value of their advertising, while known to be great, cannot be accurately estimated, as each year brings a cash return that would never have materialized but for the original Exposition, and the publicity incident to it.

The general appearance of Mechanics and Washburn Halls will be much different from that of last year, and when the visitors enter, they will be treated to a scene such as Worcester never saw before and one that will make a lasting impression.

Electricity will play an important part, and in Washburn Hall, the home of the electrical department, the effect will be dazzling.

Manufacturers throughout the county should do everything possible to aid the association in its plans. The placing of an exhibit is the strongest point, and even if the exhibit is small, it increases the number of firms represented, aids the association, and brings prestige to Worcester.

The Londonderry, Ire., Chamber of Commerce, with commendable enterprise, has issued a 40-page booklet setting forth the advantages of that city as an industrial centre. The booklet is printed in three languages, Dutch, French and English, for international circulation and embodies a careful and thorough résumé of the resources possessed and manufacturing opportunities offered by the fourth largest city in Ireland. His Grace the Duke of Abercorn, K. G., is the honorary president of the Londonderry Chamber.

The American Exposition at Berlin this Year

An Opportunity to Cement Yet More Closely the Industrial and Patriotic Ties Binding Together Germany and the United States

MUCH interest has been aroused in this country at this early date in the proposed International Exposition at Berlin this year, particularly from the fact that one of its principal aims is to present in the commercial heart of Europe an epitome of America's industrial achievements, our natural resources and our progress along artistic and intellectual lines. Designed primarily for the purpose of extending our trade relations with Germany, such an object lesson, it is believed, will have a far-reaching effect on our exports generally and serve to cement the ties of friendship which already unite the two great countries.

National in scope and planned along encyclopædic lines, the exposition is to include not only the best products of American manufacture, but also to illustrate by means of suitable exhibits the spirit of progress and enterprise which characterizes this land of unlimited possibilities.

Germany in 1908 consumed no less than $276,922,089 worth of American products, and it is believed that the gross for 1909 will run well over $300,000,000. It is certainly worth while to cultivate friendly relations with so good a customer, and hence it is not at all strange that the proposed exposition has such eminent backing in this country.

Educational exhibits showing the evolution of an article from the raw stage to the finished product, and the uses or employment of American specialties, will be grouped in one part of the Exposition palace. Machinery of all kinds, and even miniature factories, will be seen in full operation. A collective exhibit of agricultural implements is to show the world how well equipped the American farmer is for his work.

A model apartment will acquaint the visitors to the Exposition with some phases of American home life in the large cities.

An American office with the latest and most up-to-date labor-saving devices is to be shown in complete working order, and similar exhibits with reference to other American products are planned.

The management designs to have the whole present a dignified and harmonious picture. The exhibits will be placed in groups and carefully classified so that each section will show a distinct phase of American progress. This will enable the visitor to find without difficulty any particular display he may be interested in, and it will be of value to the exhibitors in that it will give them the undivided attention of seekers after information.

The Exposition will open in June and continue through the months of July and August. A better season of the year, it is asserted, could not have been selected. It is then that Berlin, the Imperial City, is at its loveliest and liveliest. The famous annual parade of the Imperial Guard in May presents a military spectacle unequaled anywhere in the world and attracts thousands of visitors from all parts of the empire.

Another event which will draw an exceptionally large number of visitors to Germany this year will be the Passion Play in the little village of Ober-Ammergau, Bavaria. The portrayal of this divine tragedy, given only every ten years, will extend through the period of the American Exposition, as it opens in May and continues until September.

The Exposition palace, in which the displays are to be grouped, was erected in 1907, at a cost of $1,500,000, and it is claimed that it is the finest exposition building in all Europe. It is located in the heart of the best section of Berlin, and can be reached in less than ten minutes' time from the business centre of the city. Stations of the various surface and subway lines and of the municipal railway are located at its very doors, making access easy from all parts of Berlin and the territory adjacent thereto.

Designed by Exposition experts, it affords the most modern facilities and conveniences, and makes it possible to display all exhibits to the best advantage.

Since its dedication by the German Emperor, the building has been the scene of a highly successful series of international automobile shows, a horticultural, an agricultural, a naval and a number of industrial Expositions. The American Exposition will be an epoch-making event in its history, in that it will be the first Exposition held in Berlin devoted exclusively to the products of a single foreign nation.

One unique feature of this exhibition will be the fact that it will be an exhibition without extras. The only charge made will be the space rental. This will include all the decorations outside and inside of the building, as well as on the individual booths. It will also cover suitable foundations for the exhibits, floor coverings, water, general lighting, janitor service, storage facilities for the packing material, policing, insurance against fire or theft, a notice and advertising space in the official catalogue, etc.; in short, all the many incidentals ordinarily most annoying to exhibitors.

The advantages of this arrangement are self-evident. Not only is it made possible by thus combining all these expenses to effect a considerable saving to the individual exhibitors and to insure much better results to each, but it will also enable them to calculate accurately in advance what it will cost them to exhibit.

For those who do not care to send a representative of their own to Berlin to install and demonstrate their exhibits, the management will provide, through a sales office and a bureau of information established in the palace, the services of competent men who will devote their entire time to such exhibits. Beyond packing the exhibits at his factory, the manufacturer can be relieved of all trouble in connection with the Exposition.

The Hamburg-American Line and the North German Lloyd have granted a freight reduction of 30% on exhibits both ways, and the German government has waived the customs duty.

Thanks to the new German-American patent treaty, the management states it will be perfectly safe to exhibit patented articles at Berlin, there being no more danger of imitation and infringement than at home.

Hon. J. Pierpont Morgan is Honorary President of the American committees, and local committees of co-operation are being formed in Chicago, St. Louis, Philadelphia, Kansas City and other places. His Royal Highness, Prince Henry of Prussia, well and favorably known in this country, is the head of the German committee having the matter in charge, and the Honorary President of the Exposition is His Highness, Adolphus Frederick, Duke of Mecklenburg.

From a Japanese Standpoint

What a Resident of Far Nippon Has to Say of Industrial Conditions in the Mikado's Kingdom in Reply to Congressman McKinlay.

IN order to show both sides of the shield one member of the Worcester Board of Trade, after the thought-arresting address of Hon. Duncan E. McKinlay at the last annual banquet, wrote to a Japanese friend in Nippon, suggesting that if there was another side to this matter than that presented by the California Congressman, the Worcester Magazine would be very glad to set it forth.

A few days ago he received a personal letter in which his invitation was declined in these words: "I think my position will not carry much weight against his; and I do not like to appear in print in any other way than as a technical man. But for your own thoughts I will pen a few arguments versus Mr. McKinlay:

"According to Mr. McKinlay's statistics Japan has an area of 147,000 square miles, and 50,000,000 inhabitants —that is, 340 per square mile. Now the United States on the Atlantic states have 53.8, central states 19.3, and western states 1.5 per square mile. This goes to show that it will be many years before United States will be populated as thickly as Japan. Increase in population will absorb increased production. She will be aided in this by emigration from Europe. It may be more profitable for United States to develop her lands than to seek foreign export.

"His observations on average wage rates paid in Japan are about right. They appear cheap per head, but figured out per ton of output we do not find this item so very cheap. In our iron works there are no powerful foundry and rolling mill hands such as are found in American works; and very, very few experienced mechanics of over forty years of age. In cotton mills the workers are poor in physique and cannot work so hard per hour.

"In manufacturing the labor alone does not control the cost of production. The first outlay of capital, a large factor to be considered, is not much lower than in United States. Land and building material are no cheaper. As for the machinery, we have to pay at least thirty per cent. more on account of freight and custom duties. He mentions the cheaply-made machinery used in our mills. This is not entirely correct. Any observer would easily note that there are very few domestic-made machines used in the first-class factories and shops. Next is the interest on capital. He says that by government aid money can be obtained at interest as low at two per cent. This seems to be exaggerated. The two large banks having government connections doing business specially with manufacturers never let out capital at less than six per cent., and it is only recently that the rate has come down as low. If by governmental aid money could be had at two per cent., why do so many of our manufacturers contract foreign loans at seven and one-half per cent. or over?

"If Mr. McKinlay's statements showed average conditions, the dividends of our cotton mills would be as stated by him, from twenty-two to seventy per cent.; but the actual figures are quite different. Of the twenty-eight large mills, four pay no dividends; five less than ten per cent.; fifteen pay from ten to twenty per cent.; and only three manage to pay above twenty per cent., the maximum of which is thirty per cent. annually. The only governmental aid amounting to a large sum is the marine subsidy. But were it not for this, the Japanese shipping companies would not be able to continue business, for of the largest three companies, the N. Y. K. pays only ten per cent., O. S. K. six per cent. and T. K. K. none.

"Regarding imitation of American machinery in Japan, as before stated, very few domestic machines are used in the first-class factories. Imitations lack stability and accuracy; and if built to give them the same quality and capacity as the imported, they cannot be turned out so very cheaply. Considered generally, all good things are imitated. Look at the products of Ludwig Löwe of Germany, and many other European firms building machine tools. In this connection it may be said that of all imported machinery in Japan, the American goods would hardly amount to five per cent.; so what endangers American export of machines to the East is not Japan, but Europe, and if Japanese imitation is going to hurt any one, it is not the United States, but Europe.

"American navel oranges were transplanted to Japanese soil and widely cultivated since about six years ago; but they are thick-skinned and lack the flavor. Japanese tea is cultivated in South Carolina; but Japanese tea continues to be exported to United States. Japanese bamboo has recently been transplanted to one of the southern states. In the near future Japanese bamboo screens "made in America" will be found in the stores. All good things are bound to be imitated; but an imitation is, after all, only an imitation.

"As for cotton goods and food products, Japan may be counted a competitor against American exports to China. But stop to consider how much that amount is of the present total home consumption of United States. Indeed, is it not widely observed that there are so many paying opportunities of magnitude right at hand that American capitalists find no inducements to seek outlets abroad? The more developed and thickly populated the United States becomes, the more demand will there be for its products. Its manufacturers are likely to have hard work yet for many years to keep pace with its rapid development.

"Let the Japanese imitate if they want to; but if America goes on to invent newer methods and processes, there seems no danger to it from this source. Meanwhile, Japan, with the conditions hardly as flowery as Mr. McKinlay describes them to be, will struggle on; and if it succeeds in developing industrially as it evidently hopes to, it will demand more American flour, more American timber, more American luxuries.

"Some Americans may like to have Japan remain Old Japan, 'The Flowery Kingdom,' the scene of 'Mikado,' etc. That is very pleasant for the select few who travel around the world to pick up curios and spend their wealth, but that probably is not to be, and the more Japan develops, imitating or not imitating, the more demand there will be for American goods."

The East Organizing

By Charles T. Tatman

THE first meeting of the committee representing the business organizations of the eastern section of the country was held at the rooms of the Merchants' Association of New York, 66 Lafayette Street, New York city, on Monday, Dec. 20, 1909, at 11 a.m. This committee of seven was appointed by the President of the Merchants' Association of New York, under the authority given by the general meeting held at the same place on Nov. 22, an account of which was given in our last number.

The members of the committee present at the meeting were as follows: Charles C. Hoyt of the Boston Chamber of Commerce and the New England Shoe & Leather Association; Charles T. Tatman of the Worcester Board of Trade; George H. Scranton of the New Haven Chamber of Commerce; Hon. Charles A. Schieren of the New York Board of Trade; N. B. Kelley of the Philadelphia Chamber of Commerce; E. S. Goodman of the Richmond Chamber of Commerce, and D. O. Ives of the Boston Chamber of Commerce.

There were in attendance also, by invitation of the committee, Henry R. Towne, president of the Merchants' Association of New York; Hon. Nathan Bijur, counsel; George H. Englehard, associate counsel; and S. C. Mead, secretary of the Merchants' Association of New York, who acted as secretary for the committee.

Charles C. Hoyt of Boston was chosen as temporary chairman of the committee. It was voted that the name of the committee be the "Joint Committee of Eastern Business Associations." The morning session was occupied by a discussion by all the members of the committee as to the purposes of the organization, and the best ways of accomplishing them. By invitation of Mr. Towne, luncheon was had at the Merchants' Club, during which the discussion was continued.

The committee reassembled at 2.30 p.m., and was in session all the afternoon, having valuable instruction from Mr. Ives and Mr. Kelley, both of whom are expert traffic men, and especially from Judge Bijur, who had been acting as counsel for the eastern organizations in the cases now pending before the Interstate Commerce Commission.

The following five resolutions were passed by a unanimous vote:

1. "Resolved, That a committee of not less than fifteen members, representing the shipping interests of the Eastern states, be appointed by the Chair, with an Executive Committee of five, selected by the Chair, for the purpose of making adequate representations to the Union Pacific, Southern Pacific, Northern Pacific and Great Northern Railroads in respect of the interests of Eastern shippers in the present Western rate situation, and that it be suggested to said Executive Committee that, in carrying out this resolution, it avail of the co-operation of the several traffic experts of the Eastern commercial bodies."

2. "Resolved, That a second general conference of Eastern commercial bodies be called for Jan. 11, 1910, to be held at the rooms of the Merchants' Association of New York, 66 72 Lafayette Street, at 10.30 a.m., and that invitations, in form subject to the approval of the Merchants' Association of New York, and of the chairman of this committee, be sent to a list of organizations to be prepared by Messrs. Ives and Mead."

3. "Resolved, That at the coming conference of constituent bodies, this committee report the activities in which it has engaged and the results thereof;

"Further, resolved, That it recommends that this committee, or a substitute therefor, be continued, with power to consider further the advisability and detail of the establishment of a joint Eastern traffic bureau, with an adequate staff of traffic experts and counsel, and that, in the meantime, said committee be requested to watch the traffic situation and, in case, in its opinion, any emergency arises, to communicate immediately with their constituent bodies for their mutual protection, and that the committee be given power to call further conference meetings for the purpose of joint action."

4. "Resolved, That the necessary preliminary steps be taken to secure permission to file a brief in the Missouri River Rate Case, now pending before the United States Supreme Court, and that, if such permission be given, counsel be engaged for the purpose of preparing and filing such brief on behalf of the interests here represented."

5. "Resolved, That this committee accept the services of Mr. George H. Engelhard to advise the committee, pending the retaining of permanent counsel."

There will, therefore, be a general meeting in New York on Tuesday, Jan. 11, 1910, of representatives of the Eastern business organizations, at which the Worcester Board of Trade will be represented as before.

In the meantime, the committee of shippers provided for in the first resolution above mentioned has been appointed, the Worcester members of the committee being as follows: Harry W. Goddard, George F. Brooks, Milton P. Higgins, Walter M. Spaulding, Ernest P. Bennett and Charles T. Tatman.

Patronize B. & A. Uptown Office

Not enough Worcester people recognize the importance of patronizing the uptown office of the New York Central Railroad on Main Street. This office was established as a convenience to Worcester people, and if they do not show their appreciation of the courtesy, there is always a possibility that the office may be abolished. The Boston & Albany Railroad is under a constant expense to maintain it, and Worcester people ought to show their appreciation of that fact by patronizing it whenever it is possible for them to do so. They can buy tickets there to any point in Massachusetts or on the globe, and they can get much better service there than they can in the crowded and inadequate quarters at the Union Station. This is particularly true at the present time, and we trust that the members of the Board of Trade, when they or their families use this line, will bear this fact in mind. The freight department of the road also maintains an office at this point, where full particulars with reference to their shipping facilities are always courteously communicated.

Easton Wants More Plants

Easton, Penn., with a population of 30,000, claims that 75% of the slate output and 54% of the cement output of the country are produced in that city. Now it wants manufacturing plants, and forty acres of desirable land have been offered the Board of Trade for that purpose at $100 per acre.

Editorial Reflections

The Town That Found Itself

IF the Worcester Magazine could preach a sermon to its readers at this New Year's time, it would take the five words printed above for a text. Perhaps its sins of omission and commission entitle it to the benefit of clergy anyway. In any event, at the beginning of this its thirteenth volume, it will venture to say a few words on a subject that lies very close to its heart, and ought to lie very close to the heart of every reader of this publication.

Worcester has many attractive qualities as a city; it is well equipped with churches and schools; it has a beautiful art museum; its sewerage and water systems are admirable; no scandals have besmirched its city government; its workmen are intelligent, conscientious, efficient and well paid; its climate is all that could be desired for the production of a hardy and industrious race; it has splendid railroad facilities, and a zealous and democratic press. Many, perhaps most, would say that nothing more was necessary, nothing more ought to be desired.

And yet if Worcester is to continue to grow and expand and develop along efficient lines; if it is to hold its place even among the great American municipalities — the place to which it is rightfully entitled,—it must do something more. Time was when Worcester and all other cities could be content to grow without effort, to take the goods the gods provided and be thankful, but that time has passed. The competitive struggle between corporations has now been extended to a competitive struggle between cities.

It was once believed that cotton manufacturing was anchored to New England so firmly that nothing could move it, but the present generation has seen the once despised South reach out its hand and lay hold of this vast business and develop it to a point where even our supremacy is threatened. In the period from 1880 to 1900 the number of wage-earners employed in cotton manufacturing in New England increased from 172,544 to 297,929. In the same period the number of wage-earners in the South in this industry increased from 16,317 to 97,494—almost six fold. It was said at first that if the South did begin manufacturing cotton cloths, it could make only the coarsest kinds of goods, brown sheeting, and the like. To-day the South makes cottons rivaling in texture and fineness the finest goods produced in the North Atlantic states. And the statistics of the census to be taken this year will show that the South has developed the textile industry in the last ten years to a far greater extent than in any previous decade, both in amount of output and number of people employed.

Take an instance nearer home. Worcester has been a metal trades town for a century. It has splendid factories, and its machinery is unexcelled by any produced on this round globe. But there are others. In gross product, in number of workmen employed, and in capital invested Worcester is swamped by Cincinnati.

It may be said that there is room enough in this country for all of us, that there is room enough for Cincinnati, and room enough for Worcester, too; that Buffalo can ignore Cleveland, Pittsburg ignore Birmingham, St. Louis ignore Chicago, but unfortunately things do not work out that way. No city can long mark time. It must either go forward or fall back. There is a tide in the affairs of towns as well as men that, taken at the flood, leads on to fortune. The city of Elmira, N. Y., threatened with the loss of the Erie car shops, accompanied by the removal of several of its leading industries to other communities, faced ruin, and the citizens got together and through the medium of their Board of Trade raised some $200,000 to bring to that city industries to take the place of those that had decamped. Elmira to-day is on the high road to prosperity, but it took a drastic lesson to bring it to its senses. It has found itself, and never again will it fall asleep intoxicated with the contemplation of its own greatness.

The question is frequently and sometimes even sneeringly asked, what does the Worcester Board of Trade amount to? The member, as he pays his dues, perhaps thinks to himself, "I do not see where I get my money back." For his benefit permit us to say that the Worcester Board of Trade does for this community what no other organization in this city does. It acts the part of a great civic patrolman, keeping watch and ward over our industrial institutions, encouraging all good concerns to come here, frowning upon all bad ones, and laboring unceasingly to keep those we now have from being stolen away from us.

Do not think as you read this brief and feeble summary that these are idle words written to justify or defend the existence of this board. The fame of Worcester's industries has gone broadcast over America, and there is not a manufacturing plant in this city but what to-morrow, if it set about it, could find another city ready to welcome it with open arms, and to provide it with facilities rivaling ours for doing its business. Worcester has no mortgage on its manufacturing plants. They are not obliged to stay here, not one of them, and it is our business, if we are to keep them here in the Heart of the Commonwealth, to treat them well and to defend them when necessary.

New England, and particularly Massachusetts, has pursued in the last few years a narrow and extremely illiberal policy in much of its corporation legislation. It has been the desire apparently to make it harder and harder for a business man to make money. If Worcester and New England are to find themselves, it must be through a contrary policy. No city in New England is more dependent upon its commercial greatness for its life than this. And we must bear strictly in mind that in the industrial struggle that is coming, yea, is already here, New England stands with her back to the wall, and every city must fight for its own hand. We can cooperate with Boston when our interests run along the same lines as Boston, and we can act with Springfield when our interests are mutual with hers, but we must fight for Worcester all the time.

Hanlon, the successful manager of the old Detroits, the Brooklyns and the Baltimores, the greatest pennant winner the country ever saw, declared that the club that won the championship must employ team work; the men must be united, harmonious and deadly in earnest, and when necessary they must sacrifice their own standing in order to help another player score. The illustration is apt and to the point. If Worcester is to hold what she has got and get more, we must move forward as one man, sinking our own personal likes and dislikes, choosing our

leaders fairly and in the light of day, and then, when we have selected them, supporting them with all the talents, enthusiasm and loyalty in our make-up. Worcester will never grow by criticism, abuse or fault-finding, but it will grow tremendously if we will be loyal to ourselves, to each other and to the town.

If the 150,000 men, women and children in this community will at this new year firmly resolve, each with himself and with another, that they will, during this year, stand for this town in preference to every other on this continent, from Seattle to Sagadahoc, this city will not only find itself and the year 1910 prove the most illustrious in our history, but the nation will come to know that in the old historic Bay State there is a city banded together as is no other, and whose inhabitants have, as a result, solved the problem of municipal growth and industrial progress.

Factory Sites

For twenty years, more or less, this city has been in the throes of abolishing its grade crossings. The original proposition years ago was to tunnel the city, as has been done in Baltimore, New York and elsewhere, and doubtless much good money would have been saved if this had been done at the time. But it wasn't, and now the tracks are being elevated. The result is the same in any event. The crossings are, or soon will be, all eliminated, a new union passenger station erected, greatly enlarged shipping facilities provided, and the city for the first time in two decades come to know what it may expect of its transportation equipment.

The settling of this great problem, involving the expenditure of more than $3,500,000 of money, will throw on the market a large number of extremely desirable and advantageously situated factory sites.

These sites will all of them be at grade and directly alongside our various railroads, with which they can be connected through the medium of spur tracks easily and at small cost.

Most if not all of these tracts of land have the railroad on one side and the highway on the other, the latter containing even now, except in the most remote sections, water, gas and sewer pipes. The rates charged by the Worcester Electric Light Company for power will, it is believed, encourage the greater use of such power hereafter, and the price of steam coal laid down in Worcester is not so burdensome as to affect the prosperity of any of the scores of corporations now using it.

Under the circumstances the next five years ought to see a tremendous development in Worcester realty, especially such as is of an industrial character. By this we do not mean to suggest that extravagant prices ought to be placed on sites in Worcester available for factory plants. On the contrary, quite otherwise. Every inducement possible ought to be made to bring new industries of a substantial character to this city, and the biggest inducement we know of is a reasonable price on the land available for such purposes. If the realty owners and real estate agents will co-operate with the Board of Trade in keeping these prices down, there is not the slightest doubt in the world that new industries of a highly desirable type will come here in ever-increasing numbers.

They will bring with them skilled labor, and these laborers, their wives and children, will all have to be lodged and fed and clothed. In the new houses that will have to go up to shelter them, and the additional business that will be developed to provide for their wants, Worcester will reap its legitimate reward.

It is to work of this sort that the Board of Trade proposes to address itself as never before, and in developing this new field the officers of this organization bespeak the sympathy, co-operation and assistance of the men who own and handle real estate in Worcester. In a very peculiar and vital manner they hold the entire future welfare of this community in their grasp. If they pursue a liberal, generous, hospitable policy, this town will grow faster in the next five years than it has in any other ten years in its history.

The Elevating Influence of Artistic Printing

Man is not only a creative being, but he is, to a very large extent, an imitative being. Scientists have found in this trait confirmation of Darwin's theory of evolution, and have pointed out that, in this particular, man betrayed most certainly his simian origin. Whether this is so or not, certain it is that the effect of refinement, culture and good taste is always elevating upon even the grossest mind. It is said that when the late Benjamin F. Butler had to address a crowd of particularly turbulent spirits in one of his characteristic partisan campaigns, he always wore full dress. He reasoned that his appearance on the stump in the garb of a gentleman would impress his hearers with his belief that they were gentlemen too. It may have been demagogism or it may have been sincerity that animated this course, but his unique career as a statesman affords abundant proof that it had behind it a great psychological truth.

Take another concrete case to the point. There is published in the city of Grand Rapids a model furniture journal, known as the Grand Rapids Furniture Record. This magazine has improved in artistic excellence during every year of its history, until to-day it ranks as one of the most artistic publications of its kind in this country. Keeping pace with it year by year have been the splendid creations of the furniture manufacturers of this little Michigan city, until to-day their durability, workmanship and aesthetic appeal entitle them to an appropriate place in even the most beautiful interiors of the Old World. The artistic excellence of the magazine has reacted on the artistic sense of the manufacturer; the artistic productions of the manufacturer have inspired the magazine makers to ever finer efforts.

Now for the application: The Worcester Magazine has for two years striven to raise higher and higher its standard of typographical excellence. It believes that beauty has a potential value in selling goods, and that a lathe, a grinder, and a screw, or any other unbeautiful object can be so artistically depicted that the result will appeal to the aesthetic sense that lies dormant in every one of us. There are hundreds, if not thousands, of trade journals in this country that are endeavoring, through the medium of letter press and illustration, to sell goods in the United States and abroad, but none among them all that come to this desk present the claims made by the producer in such attractive guise as the announcements that go out from Worcester month by month in this medium. And we are among those who believe that the result of our efforts in this direction will be not only to make Worcester goods well and favorably known in both hemispheres, but will inspire our artisans and inventors to new triumphs in the mechanical arts, and to achievements in the material universe still undreamed.

Failures of a Year

Reports for 1909 by R. G. Dun & Co. Show an Increase in Worcester.

One hundred and twenty-two failures, involving liabilities amounting to $1,614,965, and assets of $855,654, occurred in Worcester County this year, according to figures furnished by O. C. Ansley, manager of the Worcester office of R. G. Dun & Company.

This record is somewhat larger than those of the last three years, both as regards the number of failures and the amount of money involved.

Last year's record was ninety-nine failures, representing $1,225,551 in liabilities and $411,103 assets, while in 1907 there were eighty-seven failures recorded, involving $967,630 in liabilities and $353,334 in assets.

One hundred and ten failures, with liabilities of $614,355 and assets of $222,861, constituted the 1906 record.

April was the most disastrous month of the year so far as Worcester County's bankruptcy record was concerned, seventeen failures being reported by Dun's, the liabilities involved amounting to $453,787, and the assets aggregating $150,769.

Marked improvement was shown as the year drew to a close, October being the most conspicuous exception, with eleven failures, involving $475,870 in liabilities and $423,395 in assets.

There were ten failures each in January, July, August and November, eleven in March, twelve in May, nine in February, eight in June, and seven each in September and December.

The record by months for the last four years, as recorded by Dun's, follows:

	Failures.	Liabilities.	Assets.
	1909.		
January,	10	$37,242	$7,270
February,	9	54,043	8,847
March,	11	46,701	15,656
April,	17	453,787	150,769
May,	12	58,904	26,892
June,	8	19,676	7,150
July,	10	44,148	12,650
August,	10	92,634	35,344
September,	7	38,530	19,450
October,	11	475,870	423,395
November,	10	165,574	94,270
December,	7	127,856	53,961
Totals,	122	$1,614,965	$855,654
	1908.		
January,	17	$86,506	$31,967
February,	8	56,123	6,201
March,	9	52,999	15,485
April,	14	488,293	140,950
May,	3	5,608	2,415
June,	3	233,573	96,250
July,	7	80,308	42,950
August,	7	9,288	2,514
September,	10	57,833	16,537
October,	8	113,573	45,023
November,	6	23,126	5,146
December,	7	18,321	5,665
Totals,	99	$1,225,551	$411,103
	1907.		
January,	13	$102,313	$36,265
February,	6	60,576	16,978
March,	9	61,679	7,712
April,	12	298,591	111,673
May,	6	32,454	10,370
June,	10	19,843	2,830
July,	1	25,341	17,670
August,	2	22,260	9,510
September,	3	7,200	2,000
October,	3	10,954	1,425
November,	7	204,951	78,961
December,	12	121,468	28,940
Totals,	87	$967,630	$353,334
	1906.		
January,	7	$130,850	$29,111
February,	10	23,390	7,791
March,	10	49,949	3,811
May,	11	35,567	13,906
June,	5	48,796	23,638
July,	12	28,189	7,060
August,	11	52,901	32,545
September,	3	19,301	10,645
October,	12	88,074	35,973
November,	11	55,857	43,662
December,	11	33,710	8,009
Totals,	110	$614,355	$222,861

Worcester Patents

By Hartley W. Bartlett, Patent Attorney.

W. E. Marengo, Cushion Tire, No. 939,524.

A tire provided with a two-chambers opening, the chambers being arranged to diverge from each other, leaving between them, in the line of the greatest applied pressure, an annular, inwardly extending projection or ridge, which is preferably supported by an annular bridge piece, which is introduced into the chamber of the tire after the body of the latter has been moulded, and which, when introduced into the chamber, divides the latter into two chambers.

E. B. Coburn, Cutting Machine for Pastry, No. 939,981.

A machine consisting of a supporting table, a feeding mechanism, a series of rotating cutters, springs to applying a pressure to each of the cutters independently, and a device for adjusting the cutters.

A. A. Wheeler et als., Door, No. 940,291.

A door for elevator wells and the like, consisting of a swinging door and a sliding door, the swinging door being provided with a track on which the sliding door can be run.

E. C. Perry, Car Sprinkler Valve, No. 942,974.

A street sprinkler valve construction, consisting of a casing mounted to turn, a main outlet pipe mounted thereon, a second outlet pipe adjacent to the main outlet pipe, a valve in said casing for the main outlet pipe, and another for the second outlet pipe, a rod fixed to each valve, these rods being parallel and one being vertically above the other, a bearing for each rod, the bearings being opposite the pipes, and two vertical parallel levers for operating the two rods, these levers being disposed on opposite sides of the plane of the rods, and being supported at a single point to turn with the casing.

A. W. Gifford, Pencil Sharpener, No. 943,223.

A pencil-sharpener, consisting of a series or gang of flat blades having V-shaped recesses with oppositely inclined cutting edges at their upper sides, the blades arranged at intervals in transverse order, and a sheet metal inclosing case formed of a single piece folded and fitting against the bottom and side edges of the blades, and that is open at its top above the cutting edges.

Worcester Quotations

Furnished by Fisk & Robinson, Worcester, Mass.

January 5, 1910.

BANKS.	Bid.	Asked.
Mechanics National Bank	125	.....
Merchants National Bank	167½	...
Worcester National Bank	210	.....
Worcester Trust Company	300	.....
RAILROAD STOCKS.		
Boston & Albany	231 last sale	
Boston & Maine common	146 last sale	
Boston & Worcester Elec. common	10	11
Boston & Worcester Elec. pfd.	47	48
Fitchburg pfd.	132 last sale	
New England Inv. & Sec. pfd.	94	97
New York, New Haven & Hartford	158 last sale	
Norwich & Worcester	215 last sale	
Providence & Worcester	266¾ last sale	
Worcester, Nashua & Rochester	144½ last sale	
Worcester Railways & Investment	75	85
INDUSTRIAL STOCKS.		
Crompton & Knowles pfd.	147½	....
Denholm & McKay common	200	.....
Denholm & McKay pfd.	101	102
Graton & Knight Mfg. common	140	.....
Graton & Knight Mfg. pfd.	115	117
Royal Worcester Corset Co.	140	.....
United States Envelope common	52	55
United States Envelope pfd.	113	115
Worcester Gas Light	270	.....
Worcester Electric Light	.....	290
Wright Wire Company common	102	.....
Wright Wire Company pfd.	106	.....
BONDS.		
Amer. Writing Paper 1st 5's	87½	88
Boston & Worc. St. Ry. 1st 4½'s	98½	100
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5¼	basis
Marlboro & Westboro St. Ry. 1st 5's	.....	98
Norcross Brothers 1st 6's	97½	100
United States Envelope 1st 5's	101	102
Worcester Cons. St. Ry. 1st 4½'s	94½	....
Worcester & Marlboro St. Ry. 1st 5's	98	.....
Worcester & Southbridge St. Ry. 1st 4½'s	90	92

Current Events

Nov. 16. Paul U. Kellog, the New York social settlement worker, visits the factories in Worcester interested in the tuberculosis movement as the guest of the Worcester Board of Trade.

Hon. A. S. Roe, in address delivered to G. A. R., expresses regret at decision barring natives of Armenia from citizenship in the United States, stating that Civil War was fought for freedom of all races and not merely the black.

19. St. Luke's Bazaar held at the Woman's Club by the women of All Saints' Parish nets about $1000.

Worcester Branch National Letter Carriers' Association votes to hold banquet and reception to national officers Jan. 8; branch founded in 1889, and has 125 members.

20. Worcester water supply far below lowest mark of last year; normal storage 2,500,000,000 gallons, at present only 1,219,000,000, with a loss for the week of 64,000,000 gallons.

Representatives of Worcester's commercial and civic associations visit Boston 1915 Exposition as guests of Dr. Laidlaw.

23. J. Walter Flagg of Worcester chosen director of the Aero Club of New England.

At joint meeting of the New York Merchants' Association and the eastern trade associations the following represented the Worcester Board of Trade: President Charles T. Tatman, Vice-president E. M. Woodward, Benj. F. Curtis and A. C. Lorion.

Following names were presented to directors of the Worcester Merchants' Association for consideration as directors for three years: Luther C. Brown, John P. Coghlin, Richard J. Healey, Arthur O. Young, William W. Johnson.

24. Osgood Bradley & Sons awarded contract to furnish thirty trolley cars of the winter type for the Connecticut Company.

J. W. Bishop & Company secure contract to build automobile garage for Norcross Company, building to be of steel and brick construction costing $30,000.

Worcester Police Department distributes 351 Thanksgiving baskets to poor families in the city.

Samuel R. Heywood passes the eighty-eighth anniversary of his birth by making a visit to his boot and shoe factory.

25. Osgood Bradley Car Company receives charter and succeeds the Osgood Bradley Sons Company. New company is capitalized at $400,000, par value of shares $100. Officers: President, J. E. Bradley of Worcester; Treasurer, James F. Bacon of Boston; Clerk, Payson P. Allen of South Yarmouth; A. E. Goodwin and Jeremiah J. Horin, other directors.

27. Announcement made that Prof. Donald McMillan of the Worcester Academy and one of the Peary Polar party, will make his life's work one of Arctic exploration.

Worcester Lodge, B. P. O. E., obtain option on property at 27 Elm Street for location of Elks' Home.

Ex-governor Curtis Guild lectures before the Teachers' Association on "Materialism and Education."

29. Papers passed between Worcester Electric Light Company and Connecticut Power Company by which the latter acquires the right to use the poles, lines and conduits of the former throughout the city for the transmission of power for a period of thirty-two years.

30. Announcement made that Worcester Agricultural Society will net $6,477.15 from 1909 fair, largest sum in twenty years.

City of Worcester ends fiscal year with an unexpended balance of $320,000.

Patrolman Peter J. O'Marrah, appointed to the Police Department in 1895, under the veterans act, tenders his resignation.

Secretary John L. Sewall of the Board of Trade resigns position held by him for eighteen months to accept the Executive Secretaryship of the Boston 1915 Movement.

Dec. 1. Announcement made that the claims for dog damages in the county for the year ending Nov. 30 amount to $5200, largest amount in the history of the county.

Announcement made that county tax will remain at $300,000. Court House debt being cleared, purchase will be made of the land adjoining.

Representative Robert M. Washburn addresses Worcester Auto Club on "The Doings of the Legislature."

John P. Coghlin re-elected director of the American Automobile Association.

2. Robert Luce of Somerville addresses Board of Trade on "Proposed Reforms in Taxation," treating especially the inequalities in taxation as affecting manufacturing concerns.

Report of Worcester port and entry shows 3054 packages received, valued at $94,785, on which duties were paid amounting to $31,516.

Treasurer's report read at annual meeting of Worcester Musical Association shows deficit on the last festival of $150.77.

Worcester Oratorio Society presents "Paradise Lost," under direction of Mr. J. Vernon Butler.

3. Patrick James of the Worcester Freight Department of the Boston & Albany transferred to South Framingham, where he becomes general yard master.

Rev. Thomas E. Murphy of Holy Cross College speaks before the Boston City Club on "College Athletics."

Historic Oread Institute sold at mortgagee's sale to Joseph Fels of Philadelphia, for $26,000.

4. Announcement made that Free Public Library will establish a library centre at Quinsigamond for benefit of school children.

5. Worcester Lodge, B. P. O. E., holds annual memorial service.

6. While leaving work at Norton Company's, at Greendale, Axel C. Anderson killed by a locomotive.

E. J. Cross awarded contract to erect three buildings for Osgood Bradley Car Company, at an approximate cost of $25,000.

Speedway Club has annual meeting and banquet at the Warren, and re-elects Hon. Edward A. Cowee president and Harry W. Marsh secretary-treasurer.

7. Worcester retail clothiers hold informal meeting in the Board of Trade rooms and lay plans for bettering existing conditions.

10. Announcement made that Wire Goods Company of Worcester has acquired the wire goods department of the E. Jenckes Mfg. Company of Pawtucket.

Explosion caused by ignition of oil escaping from a leaky valve destroys transformer plant of the Connecticut River Power Company at Greendale, with a property loss of $25,000. Also bringing death to one fireman and serious injury to two others.

Baldwin Chain Mfg. Company of Worcester receives contract to make 35,000 automobile chains to be delivered in 1910.

13. Announcement made that Worcester Agricultural Society will make an effort to obtain the first New England Corn Show for Worcester.

14. Worcester voters re-elect James Logan mayor by a plurality of 3,832 votes, Arthur B. Brunell re-elected alderman at-large by a plurality of 4,166 votes, and vote to return to the license column by a majority of 3,720.

15. Assessor Arthur H. Burton of Worcester, re elected president of the Massachusetts Assessors' Association.

Worcester Board of Trade directors elect Mr. Herbert N. Davison secretary to succeed Mr. John L. Sewall, resigned.

President Charles T. Tatman of the Board of Trade named to act on the committee representing commercial organizations of the East to act on the Spokane Rate Case, and to devise plans for the creation of a central traffic bureau.

16. Representative Norman White of Brookline appears before the Worcester Club and speaks on the railroad question, stating that the State is controlled by a huge transportation monopoly.

Judge Willis P. Beane of Utah addresses the Worcester Federated Church Brotherhood on the subject of "Juvenile Criminals" and denounces the juvenile court procedure and law as now found in most states as impracticable and fallacious.

Miss Emily C. Wheeler of Worcester elected treasurer of Adana Massacre Committee formed in the East to give aid to the sufferers in Adana and its vicinity.

17. Announcement made that 103,000 Red Cross stamps have been given out to date in Worcester to be sold for the benefit of tuberculosis patients.

Mrs. Isabella MacKenzie Tulloch publishes two hundred page book entitled "Gems from Burns," being a compilation of selections from the various works of the Scottish "peasant poet."

Building permit issued to Norcross Brothers Company to build the children's institute building at Clark University to cost $80,000.

Dr. M. G. Overlock of Worcester addresses gathering at the Boston 1915 Movement on "The Workingman and Tuberculosis."

Worcester Commercial Travelers have sixteenth annual banquet, with Mayor James Logan as principal guest.

Announcement made that Hon. Harvey N. Shepard, Calvin W. Rice of New York, and Professor Bogart of Columbia University will address the Economic Club Jan. 13 on subject, "Conservation of our Natural Resources."

18. J. W. Bishop & Company awarded $400,000 contract to erect buildings and cottages for the Joseph Benn & Sons Company of Graystone, R. I. The J. W. Bishop Company have just completed a $350,000 contract for the company at the same plant.

The new rotary converter on the Worcester & Spencer line of the Worcester Consolidated Street Railway placed in operation. The converter is of the 300 kilowatt type and is used to convert the 11,000 volt current received from Charlton City into a current of 600 volts with 500 horse-power energy.

Announcement made that Worcester Fire Department will hold a benefit concert Sunday, Jan. 16, for the family of Westell C. Kirk, killed at the Greendale fire.

20. Chief Coleman of the Fire Department, in his annual report, asks for a new fire engine to take the place of the Button engine that blew out a pump in October.

Rev. Dr. Clifton H. Mix, pastor of Pilgrim Church, receives call to the pastorate of the Mount Pleasant Church of Washington, D. C.

21. Announcement made that the Osgood Bradley Car Company will themselves construct the mechanical row in their new plant, the building to be of wood, 220 x 40 feet.

George H. Jewett to build a garage and carriage-shop of three stories, 115 x 55 feet, with an extension 100 x 31 feet, on Shrewsbury Street boulevard.

22. Worcester Pressed Steel Company state they will build an addition to the present plant at Greendale 110 x 90 feet, to cost $12,000, and to accommodate machinery valued at $30,000, and within a year other buildings sufficient to double the present capacity of the plant, and costing $100,000, with new machinery valued at $200,000.

E. J. Cross awarded contract to build a four story addition to the Hobbs Manufacturing Company's plant to cost $15,000.

Eastern Bridge & Structural Company awarded contract to build a business block in Springfield for F. E. Fuller, at a cost of $12,000.

City Government.

Nov. 16. City Council votes to sustain life tenure of Chief of Police, and also adds two members to the License Board. Aldermen extend the Providence Railway franchise eighteen months.

Dec. 18. City of Worcester bonds for $55,000 sold to Adams & Company of Boston for $103,022, a basis of 3.45 per cent.

21. Report of the Street Lighting Department shows that it has cost the city $127,848.74 for street lighting during the year ending Nov. 30.

Water Commissioner Batchelder states that in six and one half months since June 1st last, the water supply has fallen off 59 per cent.

Revenue from water rates for year ending Nov. 30 is $350,164.26.

Worcester Necrology.

Nov. 22. Henry Randall Centre, purchasing agent of the Worcester State Hospital, dies suddenly of heart disease in New York city, aged 55 years 2 months 17 days.

23. John Clason, one of the leading members of the Worcester Swedish colony, and once sealer of weights and measures of the city, dies.

24. Hermann F. A. Lange, horticulturist, florist and clubman, dies at his home, 11 Mount Vernon Street, of Bright's disease.

25. John F. Chadwick dies at Odd Fellows' Home, aged 73 years 8 months and 26 days.

Dec. 6. Edward S. Nichols dies at Odd Fellows' Home, aged 78 years 2 months and 7 days.

10. Westell C. Kirk of Hose 1 killed by falling wall at fire at the transformer plant of the Connecticut River Power Company, aged 36 years. Leaves a wife and four children.

29. Death of Frederick F. Hopkins, general agent of the State Mutual Life Assurance Company for many years, and a member of the Worcester Board of Trade.

A Charming Story Artistically Portrayed

That all the world is coming to recognize the fact that in Worcester we aim at excellence in printing as in everything else, has recently received two concrete examples. The Worcester Board of Trade has just received a communication from Waterloo, Iowa, commenting in most eulogistic terms on the souvenir booklet issued by this Board on the occasion of the visit of one hundred Worcester people to Seattle last summer, and inquiring where the booklet was published, and a lady in New York, Adeliza Brainerd Chaffee, who has just gotten out a most artistic brochure entitled "Cupid and Psyche in Sculpture and Painting," also brought her work to Worcester for its delineation in the art preservative of arts.

This latter production, from the press of F. S. Blanchard & Company, is one of the daintiest bits of printing that has been issued from the Blanchard Press in many months, and is in every way worthy of the charming story the author has woven about a subject that for centuries has engaged the keenest sensibilities of the artist, the sculptor and the asthete.

The geniuses of the old world and the new have lovingly labored in bronze and marble and canvas to perpetuate the beautiful story of this classic legend, and this little booklet embraces within its dainty covers artistic reproductions of many of their masterpieces.

Engravings and letter press, both of them examples of the best in Worcester craftsmanship, testify to the ability of the printer and the engraver to handle a charming theme in an appropriate manner, and to give a beautiful story a fitting setting.

The author is to be congratulated on the story she has written as well as upon those she secured to portray it permanently.

Atlanta Working on its Sewage

The Atlanta Chamber of Commerce is trying to assist that city in developing its sewerage system, at present very inadequate.

WORCESTER BOARD OF TRADE

EACH FOR ALL ALL FOR EACH

11 FOSTER STREET
WORCESTER MASSACHUSETTS
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

FRANK S. BLANCHARD, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
CLARENCE W. HOBBS, JOHN J. POWER, HERBERT H. FAIRBANKS,
JOHN W. HIGGINS, EDWARD J. CROSS, WILLIAM WOODWARD,
WINTHROP HAMMOND, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
WILLIAM FORSBERG, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, WILLIAM H. SANFORD. *Auditor*, H. WARD BATES.

Membership Committee.

E. BRUCE DUNN, MARK F. COSGROVE, GUSTAF A. BERG.
BENJAMIN B. SNOW, HARTLEY W. BARTLETT

Chairmen of Standing Committees.

Advisory, RUFUS B. FOWLER.
Arbitration: CLARENCE W. HOBBS.
Building Laws: EDWARD J. CROSS.
Education: JOHN W. HIGGINS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: WILLIAM FORSBERG.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: ARTHUR C. COMINS.
Mercantile Affairs: WINTHROP HAMMOND.
Municipal Affairs: CHARLES L. GATES.
New Enterprises: WILLIAM WOODWARD.
Publication: GEORGE F. BOOTH.
Public Health: ARTHUR O. YOUNG.
Statistics and Information: MARCUS L. FOSTER.
Taxation: HERBERT H. FAIRBANKS.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

One Month in the Board of Trade

The month of December proved an active one for this organization, and our various departments have all found plenty of outlet for their surplus energy.

Early in the month Mr. John L. Sewall, who has acted as Secretary of this body since July, 1908, resigned his position to accept a similar office in connection with the "Boston 1915 Movement," so called, and at the regular meeting of the Board of Directors Thursday, Dec. 9, the resignation was accepted and the following resolution ordered spread upon the records:

"Mr. John L. Sewall, who has been Secretary of this board since July 1st, 1908, having been elected executive Secretary of the 'Boston 1915 Movement,' so called, the Board of Directors of the Worcester Board of Trade desire to place upon record their appreciation of the work accomplished by Mr. Sewall during the time that he has been connected with this organization.

"The initiative, energy and resourcefulness that he has shown in his work among us have been of great value to this board, and we congratulate the management of the 1915 Movement upon the acquisition of one whose civic ideals are so high, and whose fitness for the place to which he has been called would seem to be so unquestioned."

At a special meeting of the Board of Directors, held Dec. 15, the Assistant Secretary, Mr. Herbert N. Davison, who has, in addition to his other duties, had the direction of the Worcester Magazine during 1909, was unanimously elected Mr. Sewall's successor.

At the regular meeting of the board, a very large volume of business, much of it bearing directly on the commercial interests of Worcester, was considered.

During the past year the Medical Milk Commission, comprising representatives of both schools of medicine in this city, and two representatives of this board, have labored untiringly to improve the purity and increase the quality of the milk sold in Worcester. Dr. Leonard Kinnicutt, the eminent bacteriologist, and Attorney T. Hovey Gage, have been the delegates to this commission from the Board of Trade. Mr. Gage is the commission's legal representative, and Dr. Kinnicutt is perhaps its most useful and valuable member, for his work in behalf of pure milk, while done quietly and unostentatiously, is of priceless value to this community. Both gentlemen will continue for another year to perform their services as a part of their public duty and a proof of their self-sacrificing citizenship.

An invitation to join the National Board of Trade, with an opportunity to contribute a membership fee of about $100, was respectfully declined at this meeting.

The matter of taking photographs of the machines safeguarded in Worcester factories has been discussed ever since the recent address before this board by Dr. W. H. Tolman of the New York Museum of Safety and Sanitation, in which he suggested that such photographs be sent his New York headquarters.

Opinion with reference to the wisdom of such action seems to be divided, and the Committee on Manufactures, after making a canvass of many of the local industries, felt it unwise to recommend that such a course should be followed. Of course, if any manufacturer desires to forward such photographs, there is no possible objection to his doing so.

The matter of a trolley express for Worcester is a subject to which the Committee on Railroads and Transportation has given months of earnest and thoughtful attention and a great deal of painstaking investigation. This matter is now before the public in a more concrete form than ever before, and it appears certain that there will be in the very near future some positive action that will, in a measure, repay the efforts of those who have so long and vainly sought to solve in this community this vexed question.

The subject of presenting the claims and advantages of the Berlin Exposition of 1910 in the columns of the Worcester Magazine was referred to the Committee on Publication, and an answer to that reference will be found elsewhere in this issue.

There are few subjects of greater and more vital importance to the whole people than the new Federal tax law on corporations, and the establishment of a permanent tariff board.

Both of these matters vitally affect first and last the pocketbook and the personal welfare of every citizen. The Boston Chamber of Commerce is moving in the matter of establishing a permanent tariff board, and it has besought the good offices of the Worcester Board of Trade in helping to bring such an innovation about. The subject has been referred to the Committee on Legislation for investigation, and they will report at the next meeting.

With reference to the new Federal tax law on corporations referred to the same committee, the subject was made the occasion for a public hearing on New Year's eve that proved to be as vital and as well attended as its importance demanded.

The speaker was Hon. Charles G. Washburn, Congressman from this district, and his clear, concise and explicit exposition of the workings of this law was listened to with intense interest by a large number of the leading citizens of Worcester. The board has perhaps never performed a more useful service than in crystallizing the sentiment of this community with reference to this particular law.

For a long time there has been a sincere desire on the part of many Worcester men to bring into closer harmony and unity of purpose the various commercial organizations of this city, notably the Board of Trade, Merchants' Association, Builders' Exchange, and the Worcester Branch of the National Metal Trades Association. While these organizations all have special functions and special aims, they also have many things in common, and all of these things make for the upbuilding of Worcester. If these bodies can retain their individuality and still work together in one coherent mass for the preservation, development and productivity of this city, great good can be accomplished. It will probably not be an easy matter to harness all the conflicting and varied interests in the city of Worcester to the car of progress in either thirty, sixty, or ninety days' notice, by any man or set of men, but a plan introduced by Director Charles E. Hildreth of the Board of Trade was inspired by the hope that something tangible might be accomplished in this direction in the near future.

He proposes to form an organization here to act along similar lines to the Chamber of Commerce in Boston, and in order to formulate some joint basis of action President Tatman has appointed the following "Committee on Proposed New Arrangements of Commercial Organizations": Mr. Charles E. Hildreth, Mr. William J. Woods, Mr. Chandler Bullock, Mr. Wallace E. Morley, Mr. John J. Power, and the President, ex-officio.

A subject that is arousing great interest in Worcester as well as elsewhere just now is the playground movement. Many American cities have already made large appropriations for the development of these children's parks. Boston has been particularly active along this line. Worcester made a small and very inadequate appropriation in 1909, and there is a prospect that a material addition to the sum voted last year will be included in the budget for 1910. The Board of Trade has been active for some months in the crystallization of public sentiment in this direction, and the President, upon recommendation of the directors, has appointed a committee to consider the matter of forming a playground association, whose special business it shall be to further this good cause in every way possible. Worcester now has some 1300 acres of parks and commons, and in the opinion of ex-President Rufus B. Fowler of this board, a member of the Parks Commission, it is highly desirable that these parks should be more generally utilized for playgrounds under proper supervision.

The committee appointed by Mr. Tatman having this matter in charge consists of Mr. Louis H. Buckley, president of the retiring Common Council, chairman; Mr. William Woodward, Mr. Rufus B. Fowler, Mr. Charles E. Hildreth, Mr. John W. Higgins, Prof. U. Waldo Cutler, Atty. Earle Brown, and Mr. William F. Hyde, supervisor of the public playgrounds.

No matter of graver importance confronts the shippers of Worcester doing business in the western country than the so-called Spokane Rate Case, upon which the President wrote so illuminatingly last month. Mr. Tatman was in New York last month at a conference of members of the leading commercial organizations of the East, having been appointed a member of a special committee to recommend some definite action in this matter, and the result of his visit and an account of the very important deliberations of that body can be found elsewhere. A further meeting will be held in New York soon at which the next step will be taken in the matter of defending the interests of Eastern shippers, and that, too, will doubtless be attended by some member, or members of this board.

This is a subject involving thousands of dollars per annum to the biggest manufacturers in New England, and the whole work of fighting this case and protecting their interests has been taken up and is being carried forward by the Worcester Board of Trade and similar bodies.

Another subject of scarcely less importance to the corporations of the country is the proposed Federal tax of 1% on their income above $5000 alluded to above. With its publicity provision feature this law is proving particularly offensive to all managers of joint stock concerns. The American Protective Tariff League, the National Association of Manufacturers, and the Illinois Manufacturers' Association are the three bodies that are most active in the direction of securing a modification or repeal of this phase of the Payne-Aldrich bill. The Illinois Association has called a meeting in Chicago Jan. 14, at the Congress Hotel, to secure united action, particularly against paragraph six of the law—that bearing on publicity—and has invited this board to be represented on that occasion.

The last smoke-talk of the year was held Dec. 30, the speaker being Franklin H. Wentworth, secretary and treasurer of the National Fire Protection Association, a body made up of some seventy-two constituent organizations, national in its scope, engaged in perfecting the science of fire engineering. Mr. Wentworth spoke on "The National Ash Heap," and he produced facts and figures showing how great is the annual loss in this country from conflagrations. He is anxious that the Worcester Board of Trade shall take up in a practical way the matter of fire-proofing the Heart of the Commonwealth.

This is a brief and incomplete, but possibly instructive, résumé of a few of the things that the Board of Trade has attempted to accomplish during the ordinary routine of one month's work in behalf of the varied interests of this city.

The Corn Show of 1910: What it Means to Worcester

One matter of great consequence not only, and not even principally to this city, but to the whole of New England, taken up by the Board of Trade during the month of December, was the proposed Corn Show of 1910. This Corn Show, like the Fruit Show of 1909, marks the renaissance of agriculture in New England. Until within the last two or three years New Englanders have been obsessed with the idea that if one was to make farming a business, it was necessary to go west or "nor-nor'-west" to do it. The dollar-building possibilities of the wheat fields of Kansas, Nebraska, Minnesota, and the Dakotas, the fruit-raising fortunes of Oregon and Washington have been dinned into the ears of Easterners from the days of the late lamented Horace Greeley even to the present moment.

Last year the United States of America individually and collectively was startled to learn that the largest amount of corn raised on an acre in this country was raised on a farm in Connecticut by a gentleman named Brewer. He produced 133 bushels of corn on an acre of ground in the Nutmeg State, and the second largest amount was raised by a shoemaker in Brockton, who, in a garden just outside that city, raised 132 bushels of corn on an acre he cultivated when he was not making footwear.

These were shocking figures—perhaps one might almost venture to say that they were corn-shocking figures—not only to the men from the corn-raising states, but to the Yankees themselves, and the people in these six states will, as a result of these two achievements, plant more corn this year than perhaps ever before in their history.

There is a good deal of stimuli for such a course aside from the natural belief that we all have that we can do, whatever we set out to do, better here than anywhere else on earth, and some of it is of a very practical character. For instance, Mr. Bowker of Bowker's Fertilizer has offered $1000, in two prizes of $500 each, for the most corn grown on an acre in New England this year. Other prizes scarcely less attractive promise to give a great impetus to corn-planting and corn-growing.

Closely bound up with this business of growing corn are a thousand other related subjects, all of which will prosper if the corn crop prospers. For instance, milk, which is diminishing in quantity, will go back to its normal level if enough silo corn is planted in New England to increase the amount of ensilage now made, so that more cows can be fed.

It is impossible in the limits of this paper to discuss in any exhaustive way all that the Corn Show of 1910 will do for New England, but this may be asserted safely: Secretary J. Lewis Ellsworth of the State Board of Agriculture stated at a public hearing on this matter at the State House last month that the Fruit Show added $1,000,000 to the revenues of New England, and he had no doubt the Corn Show would add even more.

Boston wants this show and wants it bad, and is striving through its Chamber of Commerce to get it. Worcester also wants it and is striving through the Board of Trade, the Agricultural and Horticultural Societies to get it. The Fruit Show was held in Horticultural Hall, Boston, but it is conceded that that building will not be large enough for the Corn Show, and it is talked that Mechanics Hall will have to be provided if the exposition goes to the Hub, at an expense perhaps of $10,000.

If the Corn Show people come to Worcester, they will have the grounds of the Agricultural Society given them, rent free. It is probable that the Boston Chamber of Commerce will provide Mechanics Hall or some other suitable building, and will, through its agricultural committee, give the managers of the show some money for premiums—some say as much as $5000.

Just what Worcester can and will do in addition to giving the grounds rent free is not at this writing determined, but it can well afford to be generous, for the coming of such a show, with the thousands of people it will draw here from all over the country, means much.

The exposition will probably be held in November. It is said the one held in Omaha last year netted the shopkeepers of that city $300,000.

Business Office Patriotism

The annual report of the postmaster-general, just submitted to the Congress, contains one exceedingly important recommendation—that bearing on an increased revenue from the second-class mail, so called. This branch of the postal revenue is confined almost wholly to magazine and newspaper postage and, according to the figures of the postmaster-general, it has been carried on for a long time at a loss, the amount involved now reaching $64,000,000 per annum.

Investigation shows that while this class of mail yields the government a revenue of little more than one cent a pound, it costs to handle it 9.23 cents a pound. The amount of such mail handled by the government has increased since the act of 1879 was passed prescribing its limitations fully 1500 per cent., and it must be evident to everybody that some steps must be taken at once to make the income and expenditure in this particular branch of the service more nearly approach each other.

Various methods are suggested, notably the zone system, under which a given rate could be charged to all points within a certain radius from the office of mailing and a higher rate to points beyond the limits of the zone. For convenience in carrying out this plan, zone boundaries could be fixed conforming to the state lines that most nearly approximate a given radius.

Whether this system is adopted or some other, it is feared that the proposed increase will bear much more heavily on the newspapers than on the magazines, and in order to remedy that it is proposed to increase the cost of magazine postage above that charged for transporting newspapers.

It is not believed that the magazines of the country will seriously object to any reasonable increases in order to wipe this deficit out, provided the newspapers also are taxed as they should be. It is very evident that the country cannot long continue prosperous if it continues to show a deficit at the close of every fiscal year, and if the periodical press is now in any way failing to do its part towards carrying the legitimate burdens of the republic, it will, we are confident, readily agree to do whatever is necessary to put the postal service on its feet. It is not at all to our credit as a nation that the postal service is not self-supporting, and we trust that the reforms suggested in the second-class branch will not only be brought about, but will inspire the government to examine the other sources of revenue at its command, in order that other changes may be inaugurated that will enable Uncle Sam to show a balance in the very near future on the right side of his ledger.

Board of Trade Notes

The Dayton, O., Chamber of Commerce claims to be responsible for the action of the city government of that city in voting to illumine the streets brilliantly at night. April 15 will see the streets of Dayton flooded with electric light.

Salem, Columbus, Cleveland, Steubenville, Elyria, Zanesville and Dayton, O., have organized their commercial bodies into one strong central organization.

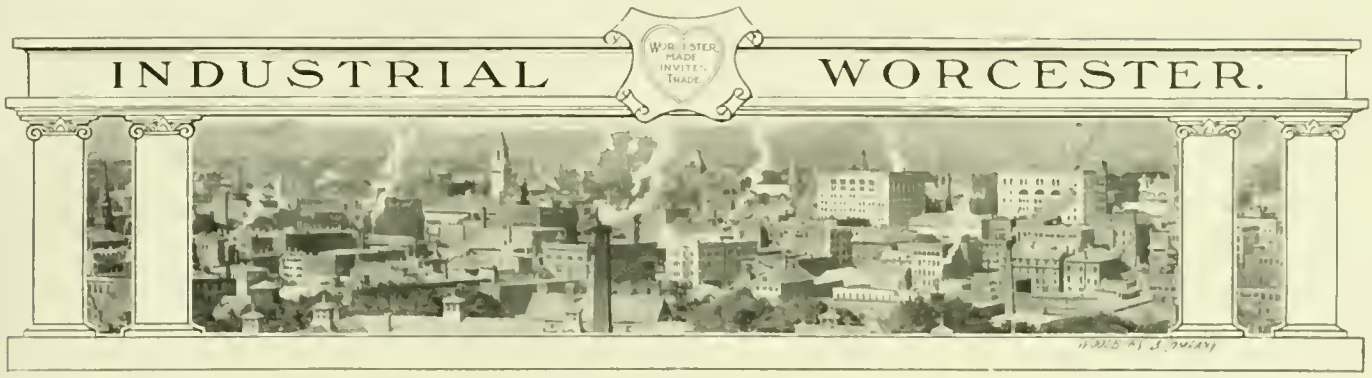
For the first time in many years the Trenton, N. J., Chamber of Commerce is on a permanent and enduring basis. An effort is now being made to secure 500 new members.

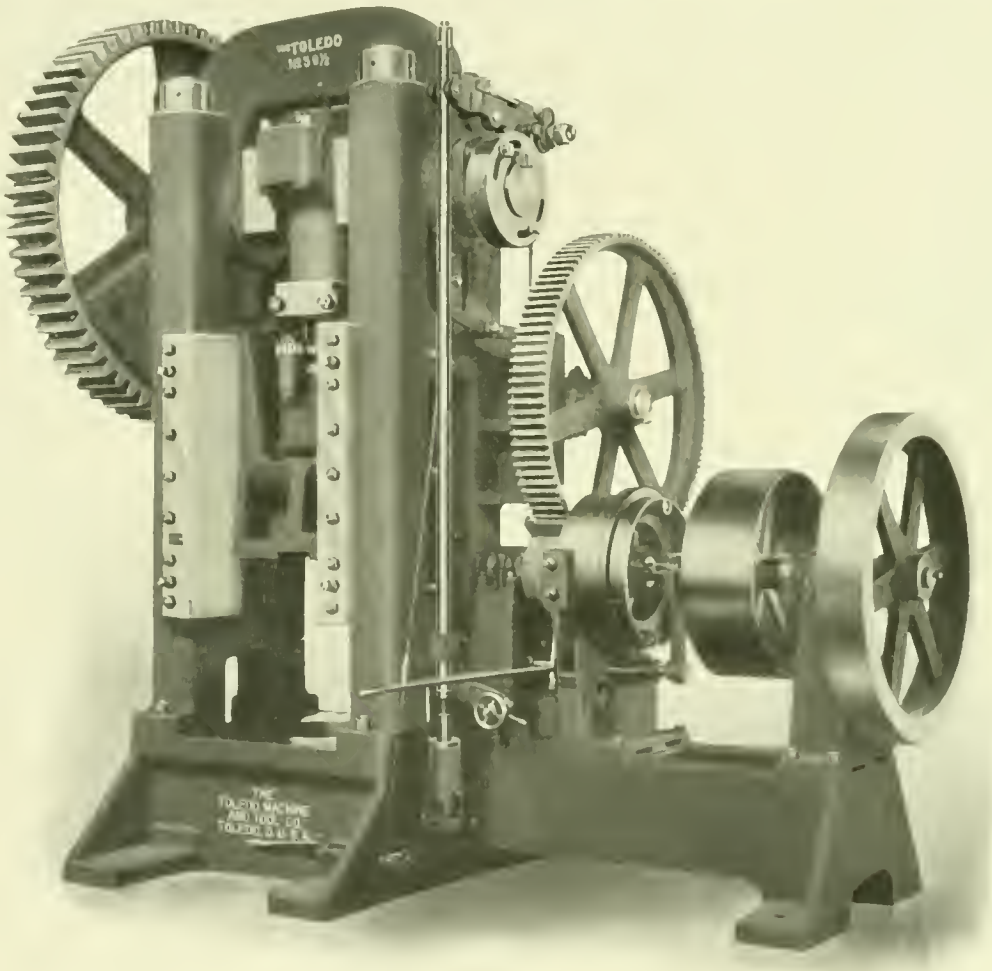
At the annual dinner of the Trenton, N. J., Chamber of Commerce this month Commander Robert E. Peary will be the guest of honor.

President F. E. LaLane of the National Board of Trade, Philadelphia, was in Buffalo last month on a visit to several cities whose commercial bodies he is anxious to enroll in the membership of that organization.

The Littleton, N. H., Board of Trade conducts a lecture course.

The Winsted, Ct., Business Men's Association is considering the subject of installing water meters in that town.





WORCESTER PRESSED STEEL COMPANY'S 1000 TON PRESS

One Thousand Ton Press

The accompanying illustration shows a powerful double-geared drawing and reducing press of one thousand tons' capacity recently installed by the Worcester Pressed Steel Company, at its works near Barber's Crossing (Greendale), Worcester, Mass. This press embodies special original features and was built by the Toledo Machine & Tool Company, Toledo, Ohio, to the specifications of the Worcester Pressed Steel Company. It is one of the largest presses of this type ever built in this country.

The machine weighs 90,000 pounds, and is designed with a built-up re-enforced frame construction (not a one-piece cast frame), assembled with forged steel tie-rods 6 inches diameter which are shrunk in place. The gearing is steel throughout, machine cut from the solid casting. The crank shaft is forged carbon steel 12 inches in diameter and supported in heavy phosphor bronze bearings.

The bed of this press is recessed 28 inches in diameter for receiving dies and through which deep drawn work may be passed. The stroke is 18 inches. The driving pulley, balance wheel and friction clutch are supported by an out-board bearing on the right hand side of the press, thus giving the operator free access to the front and rear sides to facilitate its operation. The clutch is of the patent disc friction type with gravity release and automatic stop. The press is fitted with both a hand-lever, a foot treadle and an electric stop for convenience in operating. Each works independently.

The operating power is supplied by an individual 75 H. P. direct current motor, belted to the driving pulley.

The Worcester Pressed Steel Company use this press for making pressed steel rear axle housings, gear cases, hubs, brake drums, etc., for automobiles, pressed steel car seats, ball bearings, pulleys, and other heavy pressed metal parts. This concern is working to its full capacity. A new two-story building 104 feet by 80 feet, of stone and wood mill construction, is now being built by Bishop & Company, to afford additional facilities and equipment. An additional 100 H. P. Westinghouse compound engine is now being installed in the new power-house addition, to supplement the present 150 H. P. engine of the same type.

A Novel Folder

A novelty in publicity work was launched on the commercial world this month, in the shape of a folder issued by three large industries in Worcester, having no connection with each other, but each of them selling the hardware trade. The concerns in question are the Coes Wrench Company, the Norton Company and the Wire Goods Company. The folder is to be charged monthly, including a complete rearrangement of the reading matter, and is issued in a most artistic and attractive form. A representation of the front cover appears herewith and gives a slight idea of the artistic character of the publication. The claim is made that these three concerns are the largest in their respective lines, namely: grinding wheels, wrenches and wire hardware. The circular announces that its

A CO-OPERATIVE FOLDER

object is to stimulate interest in the product of the three companies and promote co-operation and good feeling among business associates, and concludes with the declaration that "Worcester's manufacturing fame has reached all parts of the world." The folder is expected not only to increase the business of the three corporations issuing it, but also indirectly to benefit Worcester, and they will be mailed with all the letters and invoices issued monthly by each of these three great houses. A co-operative folder of this kind issued monthly is believed to be an entirely new idea in advertising.

The folder declares that "co-operation promotes prosperity," asserts that "the products represented by the three trade marks shown on this pamphlet have world-wide reputation," and concludes with the declaration that "an investment in the products represented by these trade marks will return the maximum profit per dollar."

Co-operative publicity of this sort marks an epoch in Worcester salesmanship and is a step in the direction of team work and unity of purpose that cannot but prove mutually advantageous.

The Lauf Hat Factory

One of the little known businesses of Worcester is the hat-making establishment of Paul Lauf, 32 Exchange Street, successor to A. L. Bowen & Co. since Dec. 1, 1908. The hat-making industry is an interesting process from its beginning as a piece of fur felt, conical in shape, about a foot and a half long.

This felt goes first to the sizing room, where, by constant rolling and alternate wetting in hot and cold water, it is reduced in size until the cone is about one foot long. After being shrunk, it passes to the drying-room, where it remains in an even temperature of about 130 degrees from twelve to eighteen hours.

After shrinking and drying it goes to the shaver, who carefully shaves off all the loose felt and long hairs. This makes the felt sufficiently smooth to be passed on to the stiffening department, where it is soaked in a compound of shellac and wood alcohol until the felt has become saturated.

Then it goes to the clearing department, where all the superfluous shellac is removed, making it possible to work the hat down to shape without marring the surface of the felt. The felt is then taken to the coloring department, where it is colored any desired shade. After the dye has set, it goes to the stretcher, who at an even tension stretches the tip to make the crown of the finished hat. Next it is blocked, first by soaking in boiling water to preserve its flexibility; then blocked into shape, being carefully wet with boiling water from time to time to prevent the felt's becoming brittle. It then goes back to the drying-room, where it stays from twelve to eighteen hours in dry heat.

When fully dry, it is placed in a steel die, and subjected to 500 pounds pressure in a hydraulic press, causing it to take the form it assumes on the retailers' shelves, except the brim is wide and flat and untrimmed.

From the press it goes to the finishing room, where it is worked down with fine sandpaper, giving the hat its glossy appearance. From the finishing room it passes to the curling department, where the brim is moulded into shape.

Lastly it goes to the trimming department, where, in a well-lighted room, skilled workwomen attach the band, sweat band, binding and makers' trade-mark. After it has been trimmed, it is cleaned and polished to present the best possible appearance for the market.

The soft hats undergo much the same process, except that they do not go on the hydraulic press, stiffness not being required.

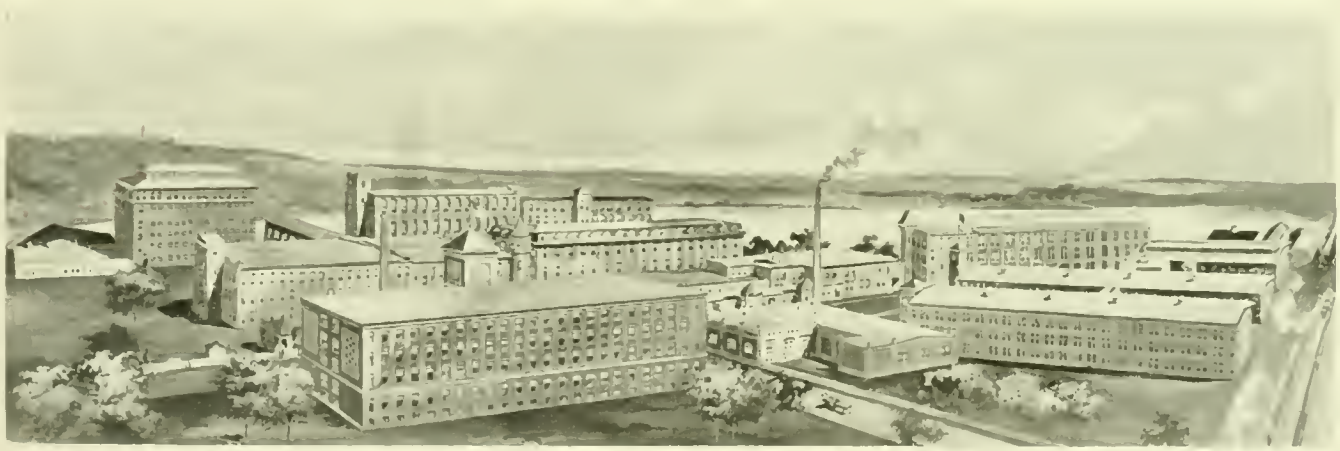
A Good Year for Worcester

What promises to be the greatest industrial and commercial revival in Worcester's history was inaugurated during the year just brought to a close. In building operations alone Worcester made the third largest per cent. of gain of any city in the country, the standing being as follows: Bridgeport, Conn., 100; Rochester, N. Y., 88; Worcester, Mass., 87. The total of building operations in this city during 1909 reached $4,284,055. In every other line similar improvement was shown. The imports received at the port of entry showed a material increase over 1908; the stamp sales at the post office, a positive popular barometer of prosperity, increased from $390,900.40 in 1908 to $417,710 in 1909, a gain of $26,809.60, while the increase in bank clearings was over $10,000,000, the total reached last year being $86,992,687.

In no way was the revival of trade shown more certainly than in the new construction rendered absolutely necessary by the growth of business in local plants. Among those making extensive improvements of this sort during 1909 were J. F. & W. H. Warren Co., Royal Worcester Corset Co., M. J. Whittall, Graton & Knight, Spencer Wire Co., Wire Goods Co., Crompton & Knowles Loom Works, Wright Wire Co., Curtis & Marble Mfg. Co., Corset H Company, Howard Bros. Mfg. Co., and Wyman & Gordon Co., all of which are depicted in their present greatly enlarged form in the following pages.

CROMPTON & KNOWLES LOOM WORKS

The concentration of the three plants of the Crompton & Knowles Loom Works, depicted above, occasioned large building operations. This concern now has the largest plant in the world devoted to the manufacture of looms.



M. J. WHITTALL'S CARPET MILLS

The extensive carpet mills of Matthew J. Whittall, the largest carpet mills in the world under individual management, was still further extended during 1909 by another new mill embracing 80,000 square feet of floor space, giving the establishment a floor space at the present time of 350,000 square feet. The number of employees now at work in these mills is 1200.

GRATON & KNIGHT MANUFACTURING COMPANY'S PLANT

The plant of the Graton & Knight Manufacturing Company on Bloomingdale Road, depicted above, now comprises nearly nine acres, a new five-story brick building having been erected last year 252 feet 2 inches long, 74 feet 6 inches wide. The new mill is 62 feet 2 inches high, and the four floors cover 72,835 square feet. The tan yard in the basement has an area of 18,208 square feet. This concern, established in 1851, and incorporated in 1872, with a capitalization of $100,000, is now capitalized at $1,500,000. The officers of the corporation claim they are the largest oak leather tanners and belt makers in the world to-day. Their first tannery was built in 1867; the second in 1880. In 1893 the first of the present four brick buildings was built; in 1903 the second, in 1906 the third, and in 1909 the fourth, thus completing the rectangle. The buildings of 1906 and 1909 occupy the site of the tanneries built in 1867 and 1880. The concern employs in the vicinity of 1200 hands.

WIRE GOODS COMPANY'S PLANT

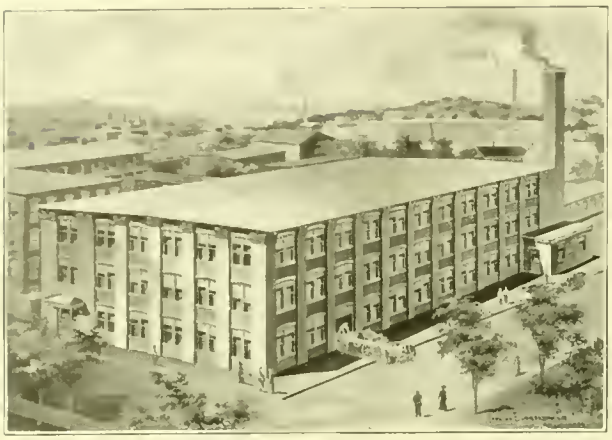
The Wire Goods Company has increased its floor space during 1909 30,000 square feet. Its plant is located on Union Street, and the concern makes a specialty of wire hardware of every kind.

CORSET H COMPANY'S NEW FACTORY

The Corset H Company's new factory at Beacon and Jackson Streets is one of the finest corset plants in the country. The building is of brick, 142 x 40, three stories high on Beacon Street, and 120 x 40, three stories high on Jackson Street, with a boiler-house 35 x 35 for heating purposes only. The total floor space is over 30,000 square feet. The building has two plunger elevators, and the machinery is electrically driven, 30 horse-power being furnished by the Worcester Electric Light Company. The plant is equipped with the sprinkler system, and was erected by A. W. Gifford for the Corset H Company.

HOWARD BROTHERS MANUFACTURING COMPANY'S PLANT

The Howard Brothers Manufacturing Company's plant in its original form consisted of a mill of four stories and basement, with an engine-room 30 x 75, the whole embracing 33,750 square feet. The new plant is 140 x 45, four stories and basement, or 31,500 square feet, exactly doubling their capacity and giving them a total area of 65,250 square feet. They have installed a new 190 horse-power Stewart boiler and a Green heater to heat the new part. The plant has an elevator at either end, a new one having been installed when the new addition was made. The completed plant is one of the most adequately equipped establishments for the manufacture of card clothing in America.



THE J. F. & W. H. WARREN COMPANY'S PLANT

The J. F. & W. H. Warren Company's new factory is on Arctic Street, near the Bloomingdale Road, the business of the concern being the manufacture of oak tanned leather belting and loom strapping, and the sale of general mill supplies. The concern was established in 1881 as J. F. & C. G. Warren, and it was incorporated in 1901, its officers being Henry W. Warren of Holden, president; J. F. Warren of Worcester, treasurer and manager; W. H. Warren of Holden, clerk. The plant now comprises a brick building, 60 x 90, three stories high, containing a plunger elevator, equipped with the International sprinkler system, heated by steam, electric lighted, and operated by electric power.

WYMAN & GORDON COMPANY'S PLANT

The Wyman & Gordon Company have found it necessary to increase their plant considerably in order to meet the increased demands for their product.

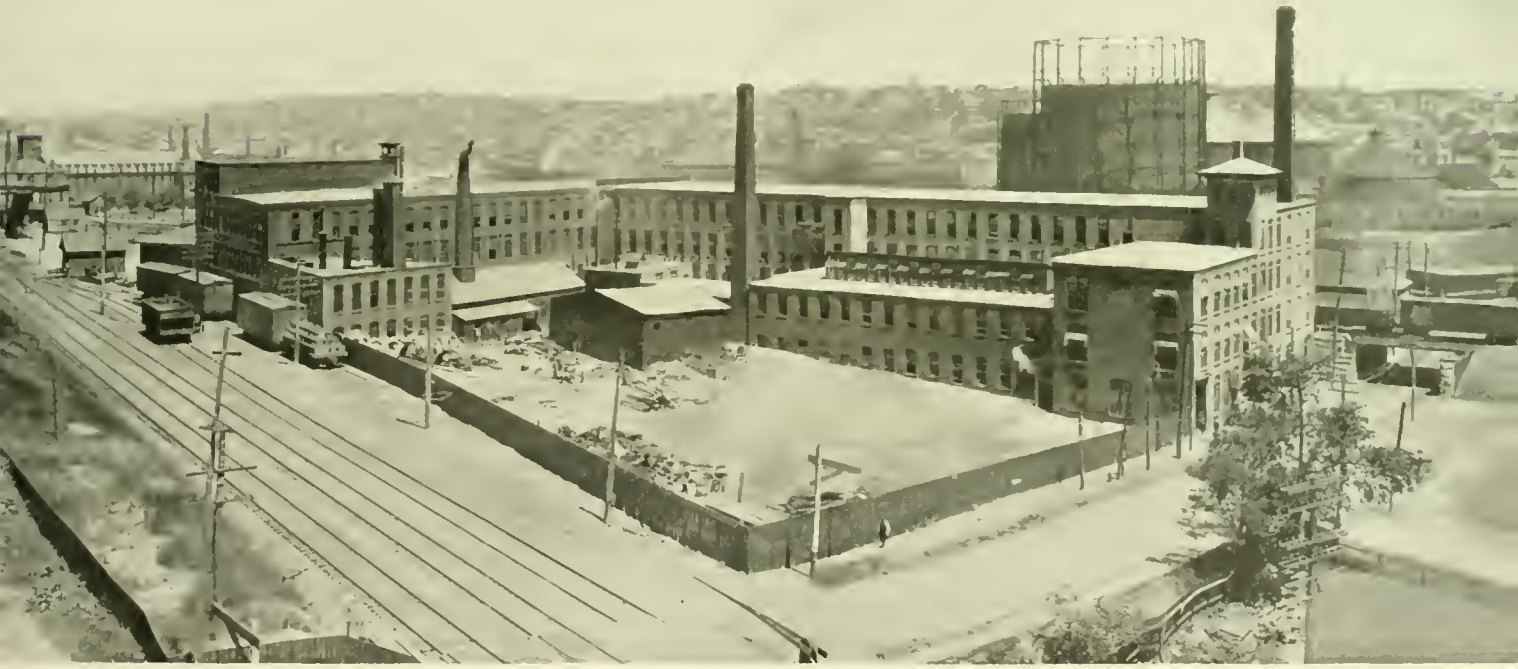
The new brick building in the foreground will be used for shipping department, die sinking department, and their chemical and physical laboratories, which are a feature of their equipment, as great care is exercised in determining just what material is being used in the manufacture of their product.

It will also be noted that their forge shop has been extended from the original to the new building, so as practically to increase their output of forging work by about fifty per cent. A number of very large tools in the way of forging hammers, heating furnaces, hydraulic presses, and furnaces for treatment of their crank shafts are being installed in this addition. All of the power necessary for operating this added machinery is provided by electric motors, the electric current being furnished by the Worcester Electric Light Company.

This company has also recently acquired property on the north side of Gold Street, directly opposite the plant shown above, and adjoining the Boston & Albany Railroad, and has placed thereon its storage tanks for fuel oil used for heating purposes in its plant. A siding will be provided here for unloading steel, coal, fuel, oil, and other materials used in the manufacture of its product.

ROYAL WORCESTER CORSET COMPANY

A new addition, four stories in height, has just been completed on the north wing of the Royal Worcester Corset Company. It is thoroughly modern construction throughout, and adds about fifty per cent. to the capacity of the plant. It also gives increased space to the general offices and other departments. The completeness of equipment, modern sanitary arrangements, spacious workrooms and superb offices of this concern have always been the subject of much favorable comment, and a large number of visitors are welcomed by the company each year.



THE WRIGHT WIRE COMPANY, WORCESTER PLANT

The Wright Wire Company practically rebuilt their entire Worcester plant last spring after the fire, and in addition they developed an additional floor space 15,000 square feet. They are now building a substantial new galvanizing building, also paint tower 85 feet high for painting wire cloth, both of which will materially increase their output. They have their own electric equipment for power and are driving their machines by direct connection. They have also rebuilt their plant at Palmer. In both places they have expended this year in building operations alone $50,000.

SPENCER WIRE COMPANY'S PLANT

The Spencer Wire Company's plant on Webster Street, shown above, has been augmented during the year by 68,500 square feet of floor space, making it a model of its kind among the wire manufacturing concerns of the country.

CURTIS & MARBLE MACHINE COMPANY

The addition to their plant, erected the past year, is 73 feet long by 64 feet wide, and four stories high, making the entire building a little over 300 feet long. The building is mill construction throughout, and the addition has an ell to provide for elevator well, with an 8 foot by 12 foot car, and wash and toilet rooms on each floor. The plans were made by Lockwood, Greene & Company, mill architects and engineers, Boston, who were the architects of the original building erected in 1897. The new part corresponds in style of architecture and detail to the present building, which was 228 feet in length before the new addition was made.

The WORCESTER MAGAZINE Illustrated

Mechanics Hall, Scene of the Exposition of 1910

FEBRUARY, 1910

$1.50 per year

Published by the Worcester Board of Trade

WORCESTER, MASS., U. S. A.

15 cents the copy

Central Supply Company

A visit to our warerooms will repay any intending purchaser

Telephone 4440

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

Foster, Commercial and Mercantile Streets Worcester, Mass.

THE WYMAN & GORDON CO.
DROP FORGED
CRANK SHAFTS

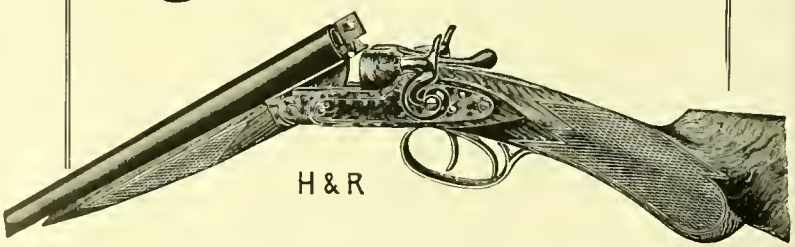
USED IN
FAMOUS CARS
THE WORLD OVER

RELIABLE
STRONG AND TOUGH

SHOPS
WORCESTER, MASS.
CLEVELAND, OHIO.
WRITE FOR ESTIMATES

TRADE
Established 1871
H&R ARMS CO. MARK
Incorporated 1888

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

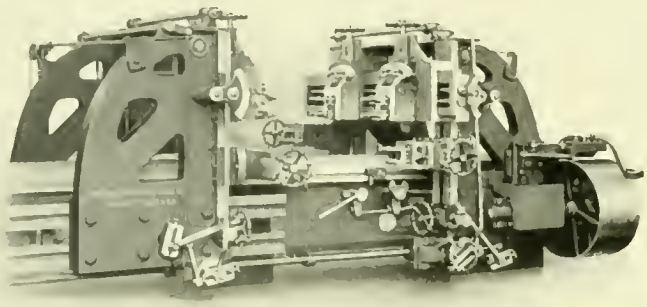
VOL. XIII. FEBRUARY, 1910 No. 2

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

ALL ROADS LEAD TO WORCESTER 29-31
ALL'S WELL WITH JOLIET, ILL. 32-34
WOMEN OF TROY ORGANIZING 34
GOOD CITIZENS FACTORY AND LAW SCHOOL—THE STORY OF WORCESTER'S GARDEN CITY 35-37
COMPENSATION FOR ACCIDENTS, F. W. Ramsey 38-39
THE WORCESTER EXPOSITION OF 1910 40-43
WORCESTER POLYTECHNIC INSTITUTE'S CLAIMS 44-45
EDITORIAL REFLECTIONS 46-47
Decadent New England
The Genius of the Playground Movement
Worcester's Interest in the Census of 1910
DEPARTMENTS 48
Trade Conditions
Worcester Patents
Worcester Quotations
CURRENT EVENTS 49
BOARD OF TRADE COMMENT 50-52
The Month of January in the Worcester Board of Trade
The Campaign for a Thousand Members
Legislative Matters of Interest to Worcester
Notes from the Field
OUR INDUSTRIAL DEVELOPMENT 53-56

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

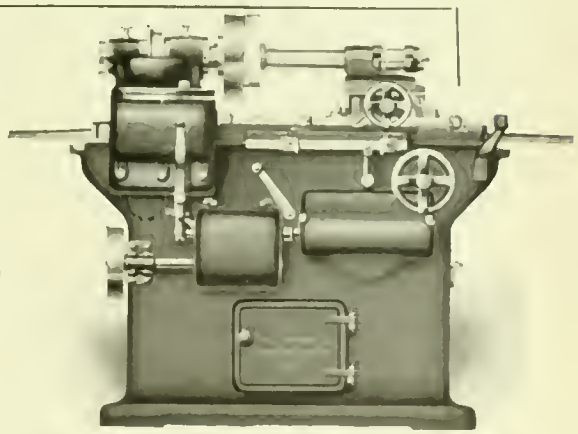
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

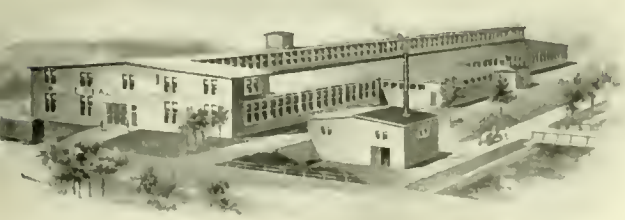
Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden A. 3, Germany and Austria.

WE MANUFACTURE

GRINDERS



CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,



ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Coates Flexible Shaft

Will stand all kinds of abuse. Can be twisted and turned in any way without interfering with the tool or business end.

Place the motor on the floor, take your two pound breast drill and "DRILL." On account of its portability and great utility in inaccessible places and tight corners, the Coates Outfit turns many puzzling time-consuming jobs into simple propositions.

Learn More About It

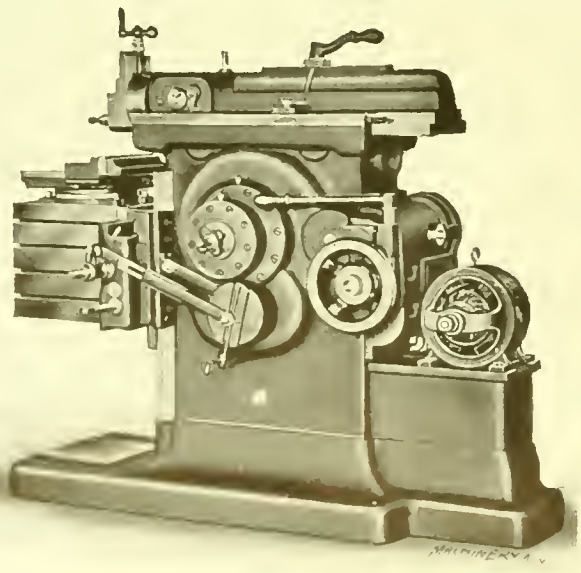
Send for book W

COATES CLIPPER MFG. CO.
Worcester, Mass.

WOODBURY & COMPANY
INCORPORATED
ARTISTS ENGRAVERS
ART PRINTERS
No. *Four Walnut St.* WORCESTER MASS.

ORIGINAL DESIGNS
BIRDS-EYE VIEWS
HALFTONE ENGRAVINGS
COMMERCIAL PHOTOGRAPHY
We Photograph
Machinery, Views, and Manufactured Products
PHOTOGRAPHIC ENLARGEMENTS
ANY SIZE
ART PRINTING
BY OUR NEW
LUXOGRAVURE PROCESS
BUSINESS ANNOUNCEMENTS, CATALOGUES
CARDS, WEDDING INVITATIONS, MENUS
A MOST COMPLETE ENGRAVING AND ILLUSTRATING PLANT

18″ All-Geared Drive Shaper



A Shaper because of the quantity and quality of work that it will turn out puts shaper-production on a new and higher level.

STOCKBRIDGE MACHINE CO.
WORCESTER, MASS.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

The WORCESTER MAGAZINE

All Roads Lead to Worcester.

From the United States, Canada and Mexico, Railroad Men are Coming Here in April to Discuss in Peace and Harmony the Problems that Confront the Transportation Agencies of the New World—A Convention that will be Different

WORCESTER should feel justly proud that it has been selected as the first meeting-place of the train service men of the United States, Canada and Mexico, and that the Worcester organizations are the originators of the movement. The meeting will open April 2, and continue for at least three days, and possibly longer. It is expected that between 1500 and 2000 railroad men will come to Worcester, representing every well-known line in North America. Prominent railroad officials, brotherhood officials and public officials, sitting on the platform together, will take part in a grand open meeting, April 3, in Mechanics Hall. Worcester will be represented by Mayor James Logan and other members of the city government.

This will not only be the first meeting of its kind in the history of the four organizations, but is expected to be one of the largest gatherings of railroad men ever held in this country. The conference has several different objects. One is to bring the members of the various organizations in train service together to discuss a plan to amalgamate into one great federation, if possible. Another is to acquaint the public, railroad officials and stockholders with the aims and work of the several organizations and the men composing their membership. Still another is for the purpose of getting acquainted with the brotherhood members in various parts of the country and the discussion of matters of general interest and benefit to all.

The organizations which will act as hosts and direct the sessions are the Brotherhood of Locomotive Engineers, Brotherhood of Railroad Trainmen, Brotherhood of Locomotive Firemen and Enginemen, and Order of Railroad Conductors. The general committee of arrangements is composed of nine representatives from each organization, and it is putting forth every effort to make the occasion a success in every sense of the word and a credit to Worcester, the organizations and themselves.

Wallace A. Paddock, of the Brotherhood of Locomotive Engineers, who was the originator of the movement and a prime mover in making the preliminary plans, was elected chairman of the general committee. A short time after his election he was promoted to the position of road foreman of engines on the Boston &

A. B. Garretson, Grand Chief Conductor, Order Railway Conductors — W. S. Carter, Grand President, Brotherhood Locomotive Firemen and Enginemen — W. S. Stone, Grand Chief Engineer, Brotherhood Locomotive Engineers — W. G. Lee, Grand Master, Brotherhood Railroad Trainmen

THE HEADS OF THE RAILWAY MEN'S ORGANIZATIONS IN THE NEW WORLD EXPECTED IN WORCESTER, APRIL 2, 3, 4, 1910

WALLACE A. PADDOCK
Originator of the Big Worcester Convention

Albany division of the New York Central lines, and at the request of the officials of the road he resigned as general chairman, but remains a member of the general committee. A. J. Desoe of the same order has been advanced from vice-chairman to chairman, and P. J. Fay of the Brotherhood of Locomotive Firemen and Enginemen was elected vice-chairman, succeeding Mr. Desoe. The office of secretary of the general committee is filled by M. N. Doyle of the Brotherhood of Railroad Trainmen, and J. F. Callahan of the same order is treasurer.

The general committee of arrangements consists of the following: For the Brotherhood of Locomotive Engineers, W. A. Paddock, A. J. Desoe, W. J. Lord, F. D. Webb, L. A. Stoodley, C. H. Davis, F. B. Woodis, E. J. Rickman and C. L. Aiken; from the Order of Railroad Conductors: C. J. Foley, J. F. Lucas, O. W. Reynolds, W. Hurlbert, Charles Tibbetts, W. M. Benedict, H. M. Harman, C. L. Smith and L. L. Davis; for the Brotherhood of Railroad Trainmen, J. F. Callahan, P. J. Scanlon, N. L. Berringer, H. A. Day, F. J. Clinton, C. L. Patnaud, M. N. Doyle, P. Jones and W. A. Williams; for the Brotherhood of Locomotive Firemen and Enginemen: F. A. Symonds, H. L. Jaquith, E. J. Saxby, P. J. Fay, H. W. Whipple, Clarence Conant, F. W. Melidy, L. H. Harding and C. S. Wheeler.

The programme thus far completed is as follows: Visitors will be met at the station by a special committee on Saturday, April 2, and directed to the headquarters of their respective organizations, where they will be entertained in secret session that afternoon and evening. The programme will be of the nature of a reception, the time being given over to receiving visitors and getting acquainted. Mechanics Hall has been secured for the following day for the open meeting, which is intended to be the feature of the occasion.

It is an assured fact that International President W. S. Carter, of the Brotherhood of Locomotive Firemen and Enginemen, accompanied by at least two of his vice-presidents, will be present, and it is expected that the heads of the other organizations will also attend.

Invitations have also been sent to the prominent railroad presidents of the country, and it is expected that they will be present in person or through representatives.

A. J. DESOE
Chairman of Committee of Arrangements

MARTIN N. DOYLE
Secretary Worcester Committee on Convention

The programme for the open meeting will include addresses by prominent public officials, workers in the brotherhoods and representatives of the executive department of various railroad systems. Musical numbers will be given between the speeches.

The arrangements for April 4, under discussion by the general committee, include sight-seeing tours for the visitors, for the purpose of showing the points of interest in and around Worcester and also the city's industries. A grand ball and reception will be given on the night of April 4 in honor of the visitors, for which Mechanics Hall is already engaged.

This ambitious plan is being carried out by Worcester organizations alone, and was begun last September. It was decided to set the date for April so as to show Worcester at its best and also give plenty of time to complete the extensive programme and make the meeting thoroughly successful. Notices and advertisements of the plans have been sent to every branch of all the organizations in America, and it is expected that the attendance will be correspondingly representative. By this means it is hoped that the railroad employees, the managers of the systems and the public will all be brought closer together in a manner calculated to promote the harmony and concord that ought always to exist between the great transportation agencies and public.

The international heads are: For the Engineers, Grand Chief Engineer, W. S. Stone, Cleveland, Ohio; for the Firemen, Grand President, W. S. Carter, Peoria, Ill.; for the Trainmen, Grand President, A. E. King, Cleveland, Ohio; for the Conductors, Grand Chief Conductor, A. B. Garritson, Cedar Rapids, Ia.

The committee is arranging to issue a souvenir book, somewhat on the plan of the Worcester Magazine, in charge of Calvin S. Wheeler, of the Worcester Lodge of the Brotherhood of Locomotive Firemen and Enginemen. It will contain a history of the organizations, international and local, with the programme of the meeting and other details. Space will be reserved for a historical and industrial sketch of Worcester, illustrated, to be written by Secretary Herbert N. Davison of the Board of Trade.

It may be interesting to know that the three railroad systems handling Worcester's passenger and freight traffic employ 1563 hands in one way or another in this city, and pay them weekly $21,515.55. This money all comes into Worcester and is spent here. These figures taken officially from the payrolls of the several departments of the three roads show what a large personal interest Worcester has in the success of this gathering.

His Honor, James Logan, mayor of Worcester, has reserved the date, which in itself tells the story of its appeal to him stronger than words. The fact that the Grand Lodge officers of each organization, the officials of the several railroads and public officials will sit on the platform together in an open meeting, on Sunday, April 3, is of sufficient importance to warrant the sanction, endorsement and co-operation of every business man of Worcester.

WORCESTER UNION STATION, BUILT IN 187[illegible] AT A COST OF $[illegible], NOW BEING DISMANTLED FOR A NEW STRUCTURE

All's Well With Joliet, Ill.

A Worcester Boy, Who Has Helped Develop a Thriving City in the Middle West, Tells What He Has Done and How He Has Done It—An Object Lesson for the Heart of the Commonwealth

SHORTLY after the close of the Civil War there was numbered among the inhabitants of Worcester, Mass., a small lad, residing there with his parents. He was just the ordinary American boy, who followed the usual playful pursuits of those days, and had no thought or care for the busy world before him. There is still in existence one of his photographs, taken in the '60's, on the back of which is printed: "Milton T. Carter, Photographer, 285 Main Street, corner Park, Worcester, Mass. Negatives Preserved." Can the Worcester of today find either that photograph gallery or that negative?

The boy visited frequently in West Boylston, one of Worcester's suburban towns, where his grand-parents, Mr. and Mrs. Winsor Morse, were pioneer residents. An old newspaper clipping, treasured alike with the photograph, gives an account of their golden wedding anniversary, celebrated at their old homestead in October, 1870.

Had circumstances framed themselves aright, this small lad might have grown to manhood within the confines of Worcester, and taken his place in some one of the many activities that have since made that city so widely known. But the fates, or possibly something more material, willed it otherwise. The "Star of the West" sent its beams into the home of the boy, and while yet in his teens, he was brought to Illinois, in which great State he has ever since resided, and where his dearest interests are centred.

And now, after the lapse of over forty years, he who was that small boy is asked to write something for the Worcester Magazine. Thus my identity becomes revealed. I accept the invitation willingly not with the belief that I can specially enlighten the progressive people of your Massachusetts metropolis, but because of the old associations and the new friendships the commission involves.

I have before me a letter from Mr. Herbert N. Davison, of the Board of Trade at Worcester, and a most worthy representative of that city, whose acquaintance I formed at the recent convention of the National Association of Commercial Executives, held at Rochester, N. Y. I do not believe I shall be violating any confidences in reproducing a portion of this letter as the ground-work for my appearance in these columns. Therefore, I quote:

"At the time of the Rochester Convention I asked you to prepare a paper for the Worcester Magazine. I wish you would tell your experiences in obtaining new industries for Joliet, along the lines that you so graphically depicted in your splendid address at Rochester. I feel that you have done excellent work along practical lines in your city, and I wish that you would especially set forth the amount of money that is spent by your Commercial Club for salaries and clerk hire, stationery and publicity work in general, for your industrial committee. Please state the number of new industries that have been brought to Joliet, and the amount of money they represent, and the number of people they employ."

With my task thus pleasantly outlined, it would seem an easy matter to cover this assignment. However, this is not the case. The campaign for new industries has progressed at such a rapid rate, and has developed so many problems that must be worked out under varying conditions and surroundings, it is difficult to strike a common basis for discussion.

There are, however, certain well-defined principles which a city may adopt, and if conditions permit a more or less rigid adherence to these rules, the problems are not so difficult of solution and the returns reasonably satisfactory.

W. O. Hodgdon
Secretary Industrial Bureau, Joliet, Ill., Commercial Club

The best rules can be made by those cities with the best advantages. Comprehensive transportation facilities, low freight rates, good labor conditions, cheap power and sound banks are deciding factors in industrial growth. The progressive citizenship that has these facilities and knows how to exploit them will be among the leaders in the resistless race for supremacy now going on among American cities. Such a community will keep its lamps trimmed and burning, a beacon light to those seeking a more favorable location, and an inspiration for still greater achievements.

There is keen competition between cities, just as there is between commercial and industrial concerns. This competition demands ceaseless attention, if prestige is to be maintained. New avenues of activity are constantly developing—new places for the manufacturer to go and find welcome. The pigmy of today, among the cities, may be the young giant of tomorrow. Publicity and industrial bureaus find plenty of work to do, and have become an indispensable feature of every progressive community.

And this brings me closer to my subject. You have asked for specific information regarding the work in Joliet. You shall have it, without bias, and with due regard for the hospitality afforded by your columns.

Quite naturally, those who live here imagine everybody knows where Joliet is, but for fear we are too sanguine, I shall take the liberty of putting this city on the map. Joliet is one of the most active manufacturing and shipping points in Illinois. The new city directory, just out, gives us over 50,000 population. The book has the names of 20,150 separate individuals

(not firms), and applying the usual rule of two and one-half to each name, we have a grand total of 50,825 people in this community.

We are thirty-seven miles southwesterly from Chicago. There are over thirty great trunk-lines radiating from this manufacturing district, and spreading out over the country like the spokes of a gigantic wheel. Only one district, that of New York, surpasses us in volume of business. Through the medium of two belt-lines all of the great trunk lines centring at Chicago are at the service of the Joliet industries, and the low Chicago freight rates prevail in this city, making a combination of exceptional strength.

With an abundance of cheap power, plenty of satisfied labor, and all the other elements that contribute to industrial success and make life worth living, it would seem that Joliet could let things take their course and secure a substantial growth without much effort. But as I have pointed out, this is not the policy of progressive communities. Other good cities are eternally vigilant, and Joliet must be equally active. We have two splendid business organizations: the Commercial Club and the Merchants' Association. The latter is largely devoted to the trade interests, but readily co-operates with the larger and more comprehensive body in every movement for the good of Joliet. The club has well appointed headquarters, including a dining-room, and at this writing is pushing its membership to the 500 mark. The initiation fee is $25, and the dues $20 per annum, payable quarterly in advance. For non-resident members the charges are $10 to join, and the same for dues. The ledger balances are on the right side at the close of the year, and a surplus is being created.

The campaign for new industries is one of the most prominent of the club's activities. This is conducted through the Industrial Committee, a body of twelve men prominent in banking, manufacturing and commercial interests, of which committee I am the Secretary. I gave up newspaper work to become the industrial agent of this city, and have found the field full of opportunities. My office is at the Commercial Club, where I am well supplied with all necessary maps, booklets and other data, and fully equipped to answer all questions regarding local conditions. At each meeting of my committee I submit a report covering all late developments, and I thus retain the active interest of the members in this work. The committee is divided into various sub-committees, and each of these is prepared to act on certain phases as they demand attention.

The expenses of this Industrial Bureau are met by a distinct fund. The Finance Committee of the club secures annual pledges from the business men and manufacturers to carry on this work. The fund runs all the way from $3500 to $5000, and the expenditures are governed accordingly. The larger the fund, the more advertising can be done, and the tendency will be to increase the fund as the years go by.

None of these annual subscriptions is burdensome. A dozen firms and individuals give $100 each, and the pledges drop from that figure down to as low as $10. Subscriptions can be paid quarterly, if desired, but in most cases a check for the entire amount is forwarded early in the year.

These subscriptions to the industrial and publicity fund are not looked upon as a donation, but as a business obligation—an investment that is just as legitimate and proper as the regular advertising bills, and which will bring returns in the coming of new industries, the growth in population, and the wider knowledge of the city.

So far, the municipality has not aided in the raising of this fund, but a movement was recently inaugurated here to have the City Council make an annual appropriation for municipal and industrial publicity. This step is regarded as both equitable and profitable, and is being adopted by many progressive cities. The advertising of a city, through the publication and distribution of maps, booklets and other data, is really a quasi-public enterprise, for the benefit of every tax payer, and in the interests of every resident. It is strictly non-partisan in its scope. Therefore, all should be given an opportunity to help, and the only way this can be done is by making an annual appropriation from the tax money.

A fund created simply for legitimate expenses of a committee such as I serve has nothing to do with a fund raised for bonus or factory investment purposes. Happily, Joliet has gotten beyond the point where cash bonuses are necessary. None has been given here for many years, and the city has had a steady and substantial growth. Whether cash bonuses are advisable, or even desirable, in the case of a city that possesses good manufacturing advantages, is a question I will not discuss at this time. Personally, I am not disposed to promote the cash bonus idea. Subscriptions to the capital stock or an issue of bonds have their proper place in the securing of new industries, although this should be indulged in only to a limited extent. The donation of land for factory purposes is another step that can be recommended, if the size of the industry warrants it. This is a question that is largely governed by conditions.

As an evidence of what a city can do by exploiting its legitimate advantages, without resorting to cash bonuses, the record of Joliet during the more recent era of growth is a striking example as well as a worthy tribute to the excellent facilities to be found here. You have asked me to enumerate some of these newer industries, with the amount invested and the number of employees. I find that the list embraces:

Mammoth new coke ovens, costing nearly $3,000,000, and employing several hundred men; a rolling mill producing merchant iron, $200,000 invested, and 300 employees; pressed steel concern, capitalized at $50,000, with 25 employees; largest art calendar plant in the world, trebled in size since the first building was put up three years ago, with over $200,000 invested, and with nearly 400 employees; wheel factory for automobiles and vehicles, $50,000 investment and 75 employees, with additions made to the plant since it was opened last spring; motor car company, brought here from Fort Wayne, Ind., with $50,000 invested in new plant, and 50 employees; fish-net manufacturing plant, moved into new quarters, and these already too small, with 10 employees, and $10,000 invested; automobile supply concern, just moved into new quarters, and rushed to the limit, with 50 employees; wall-paper plant, recently moved into fine three-story plant, with 150 employees; new $2,000,000 steel car concern, with plans for mammoth plant on a sixty-acre site which the company has bought at a price of $18,000; gas company, with new site of 100 acres, on which immense parent plant will be built in 1910, and from which gas will be sent to nearly thirty towns and cities; new bakery company just organized for $30,000, and erecting a most modern factory; a wire factory just moved into its new factory; a metal refining company recently organized for $25,-

000 and already building its plant; a pulverizer-machine company, organized for $50,000, and with its factory building almost completed; a paper box company, compelled to build large additions to its plant, the work being completed this fall; a bridge company putting up a mammoth steel building to house its increased business; a match company, a silica brick company, a machinery company, a felt-sole company, a railway supply company, a chemical company—all among the newer industries here—working to full capacity, and in some cases planning for greater factory space in the near future.

This list could be further enlarged and still keep within proper bounds, but sufficient have been named to impress one with the size and importance of Joliet's newest industrial era. The industrial payroll here runs close to $2,000,000 each month. One industry alone pays out to its employees in Joliet about a quarter of a million dollars each month.

Another great enterprise that will make Joliet famous among the cities of the country is the elevation of the steam railroad tracks. This work is now well under way, and will be completed during 1910. With a few minor exceptions, all the grade crossings in the city are eliminated and safe subways substituted. The work involves an expenditure of about $3,000,000, all of which is borne by the railroads, and hundreds of men have for months been finding employment on the enterprise. The plans include a handsome union station, and some pretty parking effects. This track elevation work is the result of over fifteen years of persistent agitation against the deadly grade crossings. It was a long fight, and attracted general attention throughout the country.

Joliet is on the Lakes-to-the-Gulf Deep Waterway, already constructed from Chicago to this city at a cost of approximately $60,000,000. The State has authorized an expenditure of $20,000,000 to carry the work from Joliet to Utica. This is through what is known as the water-power zone, and when the work is done, Joliet will be one of the greatest electrical cities in the country.

The State has authorized a commission to select a new two thousand acre site some miles from Joliet, on which a new penitentiary is to be erected, and the convicts worked on a farming instead of a manufacturing basis. The sum of $600,000 has been appropriated to start the work, and additional appropriations will be made at each session of the Legislature, until the project is finished. The removal of the penitentiary from Joliet, now guaranteed, will make available sixty acres of the most desirable factory ground in the West. A portion of this will be taken by the Illinois Steel Company for open-hearth furnaces, it is said, and the balance will be snapped up quickly by manufacturers who will recognize its splendid advantages.

Another striking evidence of the public spirit prevailing in Joliet is found in the plans for a new street lighting system. This is to be of the most modern, ornamental design, and will involve an original outlay of nearly $100,000. Work will start in the spring, and when it is completed Joliet will be one of the most handsomely lighted cities in the country.

Joliet's progress is not confined alone to its industries. In the down-town or business district, there are many evidences of the new spirit. Two of the national banks here have each expended about $200,000 in new bank buildings of striking proportions, and a third bank has spent several thousand dollars in beautifying its quarters. An eight-story office structure, to be crowned with a roof garden, is in course of construction, and the city is perfecting plans for a new city hall, on a $30,000 site, bought some time ago. Several business firms have recently completed fine store buildings, several stories in height, while in the residential districts new dwellings and flats by the score reflect the general progress of the city.

The story of Joliet's industrial and commercial growth during the past two years furnishes the brightest chapter in the history of the municipality. My department during that period has found plenty to do, and has had some share in these splendid results. I have been in touch with thousands of industries all over the country, and even in foreign lands. Advertising data for Joliet find a channel for distribution not only through my own letters, sent out by the hundreds each month, but through the letters of the business men and manufacturers, who are kept supplied with leaflets telling of Joliet's advantages, and inviting correspondence. Maps and booklets covering every phase of the work are in daily use. All available factory sites are outlined and described in a book kept for that purpose. At my invitation, scores of outside manufacturers have come to Joliet to look into local conditions. Inquiries from unexpected sources are frequently received, and important deals are always under way. Some of these take months to negotiate and, in truth, there is a maximum of effort with a minimum of results, but there is no such word as discouragement. The returns are somewhat slow at times, and results are sometimes hard to trace, but we know the seed is being planted and the harvest is sure to ripen with the march of progress.

Cities like Worcester and Joliet have important parts to play in the industrial development of this country, and they will continue to be factors in its growth and prosperity. You have your "Worcester Made Invites Trade," while we proudly proclaim "The City that Offers Something Better," and I think both cities have made good.

Women of Troy Organizing

The women of the city of Troy are being organized for the purpose of assisting the Chamber of Commerce of that city in its efforts for better government, better streets and better living conditions generally. Recently, at the suggestion of the literary bureau, the Chamber of Commerce authorized the appointment of a sub-committee to take the matter up.

The movement is not intended in any way to supersede or wipe out any existing associations or societies that may now be working for the good of Troy, but rather to bring about the consolidation of all these interests; to make a large central body in which the women of Troy can help the men of Troy in their efforts to improve conditions along Chamber of Commerce lines.

A committee, possibly of thirty-five or fifty women, will be selected by this sub-committee of the Chamber of Commerce, and these women will be asked to organize all the women of Troy into this new Civic Improvement League, or whatever name they may decide to give it.

The Chamber of Commerce will not dictate in any manner, but will place their rooms and all their resources at the command of the women of Troy.

The idea is to enroll every woman who is interested in any way in bettering the conditions of the streets, light, water and other public improvements in the city of Troy.

Good Citizens Factory and Law School

What the Garden City Has Been Called by Some Who Have Observed the Workings of this Plan for Civic Betterment Among the Little Men and Women of the Island District

Rev. R. J. Floody, S.T.B., M.S.

"BACK to the soil." "Back to nature," is the message of the social prophet of to-day. Teacher, poet and philosopher proclaim with no uncertain voice the therapeutics of the soil for body, mind and soul. The soil is the source of wealth, means of health, basis of education and condition of civilization. It decidedly has a fascinating, mysterious, and helpful influence upon the human mind. Civilization, if it really did not commence, certainly took a forward bound when man began to till the soil.

This beneficent effect of the soil is borne out by our experience in garden work for three seasons in the "Island District" of this city. This district is located in that great valley between Providence and Beacon Streets, reaching about a mile across. It is a wonderful valley and presents many interesting features.

We have counted twenty-two nationalities within its bounds, and these represent almost all the creeds of the country. From census reports "race suicide" here is tabooed. According to the last religious census there were in this valley between Park Street and Quinsigamond Village over 20,000 children eighteen years and under. The police and charity records show that much poverty and crime exist in the district.

These conditions make it an ideal place for gardens of our peculiar type, having as their object civic, social and moral betterment. Offenses against property prevailed in an unusual degree, especially when the fruit was fit to eat, as the residents of "Yankee Hill" well know. This class of vandalism by the youngsters was not really done from an evil motive. Boys are not usually bad. They are bubbling over with youthful animation and it seeks expression. "Swiping" was considered a species of fun, with a little something-to-eat thrown in.

Confronted with this state of things, we decided to resort to the soil with a view of developing the feeling of ownership and any other virtues that the system might be able to produce.

Accordingly, a five-acre dump of twenty-five years' standing was secured of the Crompton Associates for the experiment. Years ago that very spot was a marshy pond with a little island in the centre, from which the district receives its name. This was later filled up with refuse of every description from the immediate vicinity. Within recent years four signs were erected offering $25 reward for the apprehension of those who deposited rubbish, etc., on the grounds, but that did not stop the dumping.

How was the work to be done?

No money was appropriated for gardens by the Social Settlement Association under which this line of work was conducted. None could be easily collected for such an apparently impracticable undertaking, because we were told "it was a dump, and a dump would grow nothing, and if something did happen to grow, the boys would pluck up everything the night before the Fourth of July, so that not a plant would be left."

The Mayor of Garden City—Willie Dunn

It occurred to us that the energies of the little children usually go to waste, so we decided to harness their powers and experiment with them. The first task was to clean off the thickly-grown burdock of the dump. They entered heartily into the work of cutting, and carrying the "sticker bushes," as they called them, into heaps, burning the same, and this had a remarkable effect in keeping up their interest and enthusiasm.

Old mattresses, rags, dead cats, etc., were treated to the same cremating process.

The "sticker bushes" being disposed of, then came the herculean task of cleaning off the tin cans, pans, pots, glassware, crockery, wires, bricks, stones, etc.

One evening about 200 came from school in a group, and I offered a penny to the lucky boy or girl that would carry off the most bricks. A little girl ten years old won the coveted penny, having carried away 217 bricks. They finished the surface work and did it well.

It is no exaggeration to say that whole train loads of material were piled up on the street by the children to be carted off by the city teams.

The next stage in the procedure was the filling up. There were hollows eight feet deep breeding malaria and mosquitoes, ponds where water stood for weeks, and hollows, which were all filled with street sweepings and material from newly-dug cellars.

In the three seasons we have deposited some 1650 loads.

The ground was then staked off into tiny gardens in the form of a little city. This season we utilized 1400 stakes for this purpose. At first we had 67 gardens and 80 children. Some tools were contributed and the seeds were obtained from the Government at Washington. The experiment was a gratifying success, though it only cost us in cash $3. Not a single plant was molested on the dreaded "night before the Fourth." Encouraged by our experience we tried it the next year with even greater success, having 318 gardens and 400 workers.

Last season we had nearly 600 gardens with 800 children, who enthusiastically and zealously harked "back to the soil."

The ages of these little ones ranged from six to sixteen years. It was no charity affair, this Garden City. Each child had to pay for his own lot the sum of five cents, in return for which he received a red card which entitled him to a garden, the number of the lot and five packages of seeds. He owned all he raised. The love of property is the greatest efficient motive power in the progress of the race. It is humanity's great incentive to labor, invention and discovery. Here we applied this motive with excellent results.

The gardens are each 10 by 20 feet, arranged like a modern planned city, with four-foot streets on two sides of each garden. This gave free access to the little farms without interference, and facilitated the work of digging, planting and hoeing. We had two city squares filled with flowers, one of which was called Graton Square, after Mrs. Henry C. Graton; and the other, Hoar Square, after the late Senator George F. Hoar. In the centre of each square floated the stars and stripes, which constantly reminded the children, of so many nationalities, of their loyalty to and love for "Old Glory." One of these flags was presented by Mr. and Mrs. Henry C. Graton, and the other by the lawyers of the city in honor of the patriot whose name the square bears.

These children knew comparatively nothing about gardening. One boy wanted some "spunkin" seeds to raise "spunkins." Another assured us he was going to plant egg plants so as to get a crop of eggs. A bright-eyed little chap had heard of poppy seeds, so he called for some "puppy" seeds, as he wanted to raise some black and white puppies. Yet the latter boy's garden would do credit to an adult, and the information he acquired was a surprise to his instructors.

The gardens were beautified with flowers of many kinds and colors. Mr. J. H. Hemingway, Superintendent of Parks, and Mr. Hixon, contributed 1500 flower plants. Besides the two squares, the boulevard, being 400 feet long and 6 feet wide at one end and 27 at the other, was also filled with fine floral specimens, which the children admired intensely. Here were also grains and grasses, that the children usually do not see, such as wheat, barley, rye, oats, millet, alfalfa, clover, vetch, etc.

This little city has a government of its own as one of its distinctive and most attractive features. There are a mayor, city council of seven members, street commissioner, garden commissioner, water commissioner, tool commissioner and forty police officers. They held their inaugural July 26, in Crompton Park, in the presence of 12,000 people, accompanied by speeches and the strains of a brass band.

Rev. R. J. Floody S.T.B., M.S.

This was no play affair, but each official had real responsible duties to perform, meaning much hard work. They proved faithful to their trusts, too; did their duty fearlessly and did it well. Law and order was rigidly enforced, the gardens were protected and watched day and night, and all malefactors arrested in a manner that would do credit to the big police of the city.

The method of electing these officers may not be uninteresting. A meeting of the Garden citizens is called, and they appoint, by show of hands, ten electors to choose the officers of the city. These electors meet the following evening and very deliberately select the best man for each position. The special fitness of each candidate is thoughtfully canvassed on all sides, and the conclusions reached are the honest, independent conviction of each elector, the responsibility and seriousness of which office they deeply feel. By this method the influence of thoughtlessness, impulsiveness of friends of candidates, scheming of sets and cliques are eliminated and the very best timber for the office is secured. After the election of the mayor and city council of seven, they meet and appoint the city clerk, treasurer, commissioners and policemen.

Twice Chief of Police David A. Matthews made up a party and invited the boys to his office at Station 1.

He showed them the sights and workings of the whole institution and gave them a treat of candy, nuts, etc. Twice the boys invited the Chief to the Settlement House, and there he ate peanuts with the boys and received from their hands a beautiful bouquet of flowers bought with their own earnings.

In connection with the Garden City was a zoo, consisting of foxes, rabbits, guinea pigs, white rats, white mice, chipmunks, squirrels, pigeons, woodchucks—forty in all.

This novel feature was introduced to teach the little farmers the virtue of kindness to animals. In the old days in the district cruelty to animals prevailed to an alarming degree. We have even known of a boy cutting out the eyes of a kitten with a knife and filling the sockets full of sand. It is a known fact if a child is given a little animal to feed and care for he will pet it. So our animals were secured and given in charge of some youthful keepers. They had no sooner commenced to care for them than they were the pets of the whole community. The crowd seemed to centre around the animals. For hours we have seen the little ones lie down by the cage, watch and feed the little pets.

Affection was shown when a pet coon died. One night he escaped and was found dead the following morning in the street, supposed to have been killed by a man or dog. Some cried after their pet. The boys buried him in the gardens, in a casket, with the words written with chalk on the lid, *At Rest*. The grave was sodded, decorated with flowers, a square, whitewashed stone at each corner, and a little cross in the centre. After the ceremonies of the interment were over, the mayor said: "Boys, we will start a Band of Mercy, and the fellow that don't join we will make him."

Before this, we were unsuccessful in starting such an organization. A representative of the W. C. T. U. talked to the boys in the Settlement House and asked them to start a Band of Mercy. "Oh, yes, we'll join," and a paper was given them for signatures. I examined that interesting document and noticed such names as "Tommy-stick-in-the-Mud" from "23 Skidoo Street," etc. The affair was a laughing-stock and ended in failure. But with the death of the pet coon they started in earnest and now have 800 members—the largest Band of Mercy in the world. Not a single case of cruelty to animals has been reported from the district for months.

Prizes for the best-kept gardens were offered, with good conduct and faithful service included. There were two grades of rewards offered, the first of which was an auto trip to Bunker Hill and Boston. Mr. Geo. D. Webb of the Webb Granite & Construction Company made the arrangements and secured twelve autos from the most prominent people of the city, and gave ninety-three children the first great ride of their lives.

We will close by outlining some of the benefits that may be expected to be derived from this particular plan.

Physical.—In the first place this method gave the children something to do. They were made for nature and crave action, and they get it here right out in the open air and sunlight. All the muscles of the body are brought into play and strengthened by the use of the spade, hoe, pick, wheelbarrow, etc.

Mental.—Here the mind is always at work, learning about the nature and quality of soils, their adaptability to certain kinds of seeds, nature of seeds, appearance of leaves, flowers and fruit, the enemies such as grubs, bugs, worms and flies. Also the designing of the gardens, their ornamentation, the best arrangement of their crop. Such work looks to the future and compels interest and attention. So helpful is the soil that the feeble-minded and defective in some institutions have been put into gardens to work.

Moral.—This kind of work took the children off the streets and kept them out of mischief. They are landowners now, and have learned to respect property and hate stealing. They found out the meanness of stealing when some thief stole from their own little plots. It wasn't called "swiping" then, it was just mean. This led them to put a ban upon the whole business of "swiping." In many cases a new conscience has been awakened.

Æsthetic.—The children saw the beauty of the gardens in contrast with the dump, and contrasted the beauty of one garden with another. They came in direct contact with the flowers—a constant inspiration to them. The pet animals of the zoo had a softening and refining influence upon the garden toilers. While they were tending and feeding their pets, the finest part of child's nature was touched.

Financial.—Some of the children sold their vegetables, but most were consumed in their homes. The children owned all they raised, which is estimated at $1200. Money, in the way of gratuities, was awarded "Garden City" at two children's exhibitions at the Horticultural Society. The transforming and beautifying of this district has enhanced the value of property many thousand dollars—some estimate at $30,000.

Economic.—The city has a great object lesson as to how to utilize waste land. The inhabitants of the little city were trained to love work and not be idlers or sports. This spirit of utilizing waste land was shown in the little beds made in back yards, and the planting of seeds on the graves of loved ones. The effect of *producing something* gave the first impetus to a business life. The work developed strength, courage, grit, independence, thrift, honesty, self-reliance and manliness—the qualities needed to a successful business career. Every boy and girl has learned, more or less, the trade or business of tilling the soil, which is the most fundamental of all. This is the only vocation that is not crowded. Some of the boys already have indicated their preference therefor.

Civic.—Besides instruction in justice, law and order, they made a practical application of it themselves. In a real way they dispensed justice by enforcing law, arresting violators of the law, meting out punishment to them, etc. Indeed, it was a Good Citizens Factory and Law School. A training is also given the boys for positions in the City Hall in the future. It is a serious thing to elect men to city positions without having the least experience in the exercise of a public trust and put at their disposal millions of dollars for distribution. This system gives the boys a helpful training for such positions. They made the laws for Garden City and enforced them. And this is the only "no-swear," "no-smoke" and "no-license" city in the world.

Social and Spiritual.—Here all nationalities and creeds meet together and produce a family spirit. They are taught the significance of a line fence, and the rights of their neighbors. Each is required to give ten hours' work in helping another, or working in the interest of the garden.

Compensation for Accidents

Mr. F. W. Ramsey Tells of the Plan in Operation in the Works of the Cleveland Foundry Company

To one of the recent issues of the Iron Age, Mr. F. W. Ramsey contributed one of the most interesting and valuable narrations on the subject of compensation for accidents, as this matter has been worked out by the Cleveland Foundry Company, that has recently appeared in any American periodical. So interesting and timely was the article that we have ventured to reproduce it here in order that our readers who are not connected with the metal trades may have an opportunity to peruse it at their leisure.

Mr. Ramsey says:—

"In our business we operate a great many stamping presses, which are prolific of injury to the fingers and hands of operatives, and fully 90 per cent. of our accidents occur on these machines. For several years we have averaged nearly 50 accidents per year, ranging from the loss of the tip of a finger to all the fingers of a hand. These machines are operated on the piecework basis, and the monotony of the operation is a contributing cause to the accidents which occur.

"About a year ago we set aside one of our best men —a designer of tools and machines—to devise improvements looking toward the elimination of this hazard. His first work was to inspect critically all of the dies used in these presses, with a view to ascertaining what changes could be made in their construction reducing or eliminating the chances for injury. We have been reasonably careful in the construction of our dies, but this special attention developed the fact that in at least 50 cases simple changes could be made in the construction of the dies, which would reduce from 50 to 100 per cent. the hazard to the operator. These involved little or no additional expense in the first cost of the tools, and in no case involved a higher cost of production, but in a number of cases actually reduced the cost of production. The improvement made it possible for the man to work with greater confidence and thus perform the operation more rapidly.

"As a result of this work we have designed several new principles—new to us at least in die construction, which will practically eliminate the chance for injury in many cases. They are in the nature of automatic feeds, sliding and swivel dies, which make it unnecessary for the operator to expose his hands to injury.

"Those here familiar with stamping press operations will understand that in many cases the operator exposes his hands both in charging the die and in removing the work. We have learned of the use of compressed air for discharging work from the die, and have installed an air compression plant, which permits of our applying air in a great many cases for the purpose of removing work from the dies, thus securing at once, in all cases where air may be applied, a saving in the cost of production which we believe in the course of a year or two will fully reimburse us for the entire expense of installation.

"In our die, tool and machine construction we have adopted this policy and have sought to bring all the men of our organization concerned to the support of it, viz.: 'In the construction of dies, tools and machines, our first regard shall be for the safety of the operator. We will not concern ourselves with the question of economy in die construction or in production from the dies, except as economy may be effected without subtracting from the safety of the tools in question.' As this policy has been working out, we have been delighted to find that it may be applied without additional cost in tool construction and with actual saving in the production cost from the tools.

"Not only are we finding it profitable to prevent accidents involving injury to our men, but we are finding it profitable to spend money on the improvement of sanitation and ventilation, and all conditions affecting the health of our workmen. We have a striking illustration of this in an experience we are now going through.

"In our soldering department the conditions have been unhealthful for many years. The atmosphere is heavy constantly with fumes from the contact of hot soldering irons with the acid flux used in soldering. It has always been a problem to keep the force constant in this department. We have been compelled to hire as high as 225 men in a year to keep 75 to 80 men at work. We have been aware that the men were leaving the service because of the unhealthful conditions, but the difficulties seemed insurmountable until, under our new policy, we determined to find a way. After a few weeks of study we are now preparing to install an exhaust system, representing an investment of not to exceed $1200, that will entirely eliminate the unhealthful conditions. We are confident that this will result in making the force in this department 50 per cent. more constant, which will fully cover the investment, not to mention what is of more importance—the protection to health and the higher efficiency of the men employed.

"As I have said, nearly all of our accidents occur on stamping presses, and are in the nature of crushed and severed fingers. Amputation is usual in the case of a press accident, and men are incapacitated for a few days or for many weeks, according to the seriousness of the injury.

"In the first place, we have engaged a competent surgeon, who looks after all our cases. We place no restriction upon the amount of medical or surgical attention the injured man shall be given. We pay all the expense of such medical or surgical attendance. In the matter of wages, we pay our injured men their full wages for all the time that they are unable to work. We formerly paid injured men their day-work wage while incapacitated, which usually was only 60 to 70 per cent. of their normal piece-work wage. This later impressed us as being unfair. Within the last year we have paid the full piece-work wage, based on the man's earnings over the previous thirty days, for all the time that he is incapacitated because of the injury.

"We require injured men to report for work as soon as they are able to do light work which will not involve the injured hand—work, for example, which can be done with the one well hand. We usually place these men in our stockroom, where they are constantly before us, and where we cannot escape keeping them in mind, to the end that as soon as able they are placed on work which will pay them as nearly as possible the wage which they were receiving previous to their injury. We regard our injured men with a great deal of solicitude, and in case the injury permanently impairs a man's earning capacity we feel a definite responsibility for his future and try to provide for it.

"In addition to the above, where an injury to the hand involves three or more phalanges of the fingers of the hand, we feel called upon to make an additional cash settlement, which varies according to the extent of the injury. We sought for a long time to find some fair basis upon which to determine what these cash settlements should be. We had to consider the question of our ability to pay, along with the question of compensation due the man. As a result of our study, we have placed a certain value upon each finger of the hand, subdividing these amounts into values placed upon each of the phalanges of each finger. The total of these, involving all the fingers of the hand, amounts to $1260. This is the sum we pay for the loss of all five fingers of the hand.

"If but two phalanges of a finger are lost, we pay nothing. If more than two, we pay according to the values that we have set upon each phalange. If the entire thumb, for example, is involved, considering this to be the most valuable member of the hand, we pay $300. If the entire index finger is involved we pay $285. If the first joint of the first, middle or ring finger is involved we pay $225. We have not been called upon as yet to pay the entire compensation for the loss of all five fingers of the hand, but we have paid $1000 under this system for the loss of four fingers.

"You will understand, of course, that we have not set these amounts against these different members with the idea that they represent or even approximate the value of these members to the man. We have established this plan altogether on the basis of what we believe is the fair and reasonable thing to do, with due consideration to the needs of the man and our ability to meet his needs.

"There is one other interesting line of work which we are trying to develop. We have come to feel some measure of responsibility in case of illness of our men, and as a first step have recently made it one of the functions of our labor supervisor to keep track of all men who become ill in our service, with a view to providing what may be necessary in the circumstances. I want to relate two experiences which have done much to bring us face to face with our responsibility in this regard.

"We happened to observe, a few months ago, a young man in one of our departments who looked ill. He was pale and emaciated. Upon inquiry we found that his foreman had observed his condition. He had been in our employ for some years, was faithful and competent, but of late had lost time frequently because of illness, and had been observed to be steadily declining. We interviewed the man and found that he was feeling miserably ill, and, as we expected, was up against home responsibilities which made it impossible for him to see any way out for himself but to keep on working in the hope that he would come through all right. I sent him to our physician, learned that there was nothing organically wrong, but that he was rapidly approaching a complete nervous collapse and would require an immediate change to lighter work, with shorter hours. He was a good clerical man and we brought him into our office and put him on clerical work. He has proved very competent and will be retained in our office service, and has almost completely regained his health.

"A year ago we were involved in a really unjustifiable labor difficulty with our polishing and buffing department, affecting some fifty men. It was an extremely expensive fight to both the company and the men, involving thousands of dollars. One of the ringleaders on the side of the strikers, who was chairman of the Strike Committee and president of the local union, was among the men whom we could not avoid taking back. We observed some time ago that he had been out of the service for a period of two or three weeks. Upon making inquiry of his foreman it was learned that he was ill, and the foreman expressed the fear that the man was afflicted with tuberculosis, which is a rather common disease among polishers and buffers. It came to us forcibly that we were under some obligation to assist this man, who had been in our service seven years, engaged at work dangerous to his health. We had him examined by a competent physician and learned beyond any question that he was afflicted with tuberculosis, but that he had a fair chance for recovery. To comply with all the rigid conditions—viz., three months or more of absolute rest, a special diet and a long list of special requirements, which would have been as impossible to this man, without a dollar, in debt, with a wife and child to support and not a relative or friend to assist, as a trip to Europe for his health, we proceeded to do for this man everything that was needful to insure his recovery, and doubtless within three to six months he will be able to make his own way again.

"A year ago we were fighting each other, he with a mistaken notion of us and we with a mistaken notion of him. The other day I received this letter from him, eloquent in its testimony to the supreme merit of a plan that reaches in its helpfulness the need of such a man as this:

> My Dear Friend: I will write you a few lines, leaving you know how I am getting along. I have been here a week to-day and I certainly do feel the change, breathing the fresh air all the time. I was feeling good until to-day. I don't feel my best, as it has been a sultry day, and it made me feel very tired. I started to sleep in my tent Tuesday night. I sleep good all night and get up feeling fine. It took us a couple of days to get settled, but we are living in our own part of the house. I tried to thank you for what you are doing for me in the office, but I could not talk; but you cannot tell my feelings, knowing that it means happiness instead of worry to me, and that I have a chance to get cured.

"From a purely financial side we consider this type of welfare work tremendously worth while, for at the expenditure of a few hundred dollars at the most we have not only, in all probability, saved the life of a man, but have won, by fair dealing, the everlasting loyalty of the man and his friends in our employ, and have carried our business a long way from the possibility of disastrous labor difficulties. And while these considerations of material benefit to ourselves are not the worthiest motive behind this sort of effort, these benefits must follow in the wake of such a policy, if it needs justification on this basis."

A Busy Man

L. L. Dennett of Modesto, Cal., is city solicitor, attorney for the Modesto Irrigation District and San Joaquin Irrigation District, official superintendent of the census, president of the Methodist Brotherhood, trustee of the Methodist Church, belongs to several lodges, heads a large number of committees, sings in the choir, has an extensive law practice, and is President of the Stanislaus County Board of Trade. There being but seven nights in the week, and Mr. Dennett being a married man, he desires to resign some of these offices in order to get acquainted with his family.

The Exposition of 1910

Washburn Hall a Dream of Beauty, and Mechanics Hall the Meeting-place for the Inventive Genius of Worcester, in the Most Valuable Exposition Ever Given by the Mechanics Association

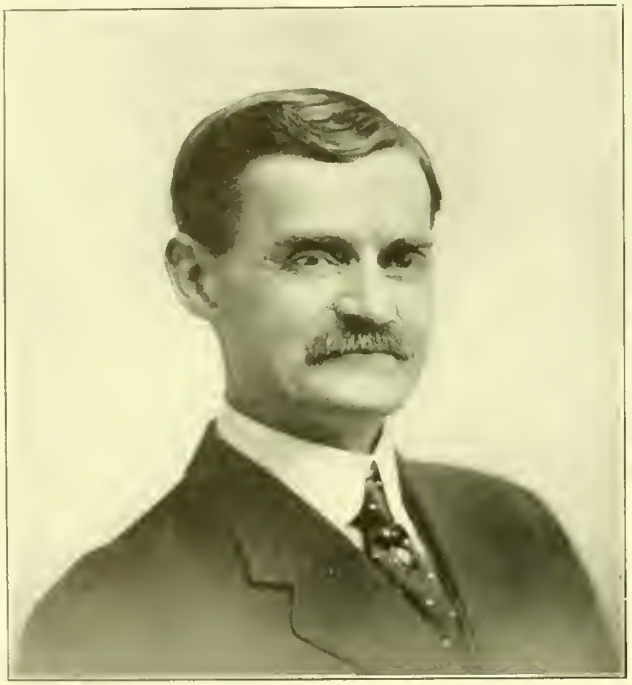
THE success attained last year by the Mechanics Association in its Exposition in Mechanics and Washburn Halls, under the management of H. F. Campbell, has encouraged that organization to hold this year an exposition of an even more elaborate nature.

The show lasts from Feb. 5 to 12, and there is every reason to believe that the attendance will tax the capacity of the building to the utmost.

The Exposition this year will include not only all the attractive features of last year, but some that were not included then. For instance, the textile industry will be represented this year, Crompton & Knowles showing for the first time a new automatic loom. This will be in operation afternoon and evening, and will be subjected to the same tests as if it was set up and running in a mill, turning out the finished product. The boat and motorcycle people will also be represented by fascinating displays, and there will be interesting exhibitions of china painting, firing, etc.

The Exposition conducted by Mr. Campbell is absolutely unrivaled. No other city in the Union has made a finer display of "live" exhibits, as they are known; that is to say, exhibits of machinery in actual operation.

Rochester, Cleveland and other cities have given more elaborate exhibitions, but they embrace many features that are common to the well-known food fairs and do not now possess the interest to the public that they did ten years ago, when such displays were not so common.



H. F. CAMPBELL
Manager 1910 Exposition

New lines of drills, lathes and grinding machinery will be shown, much of the metal trades division being given up to devices just being placed on the market and absolutely new, even to the purchasing agents themselves. It is believed that this one feature alone will serve to bring to this city manufacturers and manufacturers' agents from all over the Union.

Ross Brothers Company will show an electric incubator, and chickens will be hatched out before the eyes of the spectators by this unique process. Another interesting exhibit will be that of the Worcester Elastic Stocking Company, the machine being operated by an employee, who uses both hands and feet in his work.

A superb exhibition will be given by the Worcester Electric Light Company, which has worked out an elaborate design on the stage of Mechanics Hall for that purpose.

The arrangement of space for the several exhibitors has been artistically worked out, and will possess many attractive features not common to the Exposition of 1909.

By placing exhibitors in spaces beneath the balcony in Mechanics Hall, as was the case last year, and then having the balance of the spaces run from side to side of the hall, instead of lengthwise, as at the Exposition of 1909, the visitors will be broken up more and there will not be the crush that was the rule one year ago.

In Washburn Hall there will be spaces around the outer wall, as last year, but the principal spaces will be in three large octagon sections in the centre. All spaces in which heavy machinery is to be placed will be covered with two-inch planking, so that the machinery can be bolted down. Then a heavy covering of oil-proof material will be placed over the planking and over the floor of all the other spaces, in order to protect the dance floors.

The decorative scheme this year will be as elaborate and beautiful as it is possible to make it. In Washburn Hall the electrical display will be particularly striking, with a pronounced tendency toward the asthetic. The hall itself will be a dream in white. Every one of the booths will be designated by a series of delicately carved white staff posts, surmounted by electrically lighted baskets of flowers, and the posts will be connected with each other by a low ornamental rail, adorned with scrolls in stucco.

Rising from the booths in the centre of the hall will be artistic pillars of carved white staff, fifteen feet in height, capped by a cluster of electric lights. This scheme of decoration will be carried out consistently throughout the hall, and the effect promises to be dazzlingly beautiful.

Mechanics Hall will also be handsomely decorated, although in less ornate fashion and more in keeping, perhaps, with the character of the exhibits.

The signs will be a feature, as well as the electric lighting. In Washburn Hall they will be about 28 by 24 inches in size, covered with red pebbled paper, and with the name of the firm in gold letters. A handsomely carved stucco device crowns the sign and forms part of the decorative scheme of the hall. In Mechanics Hall the signs will be oval in shape and about thirty inches long. They will be covered with marbleized paper, painted in gold, and enclosed in a scrollwork design of black iron. They will be supported in place by iron rods inserted in the corner posts of the spaces.

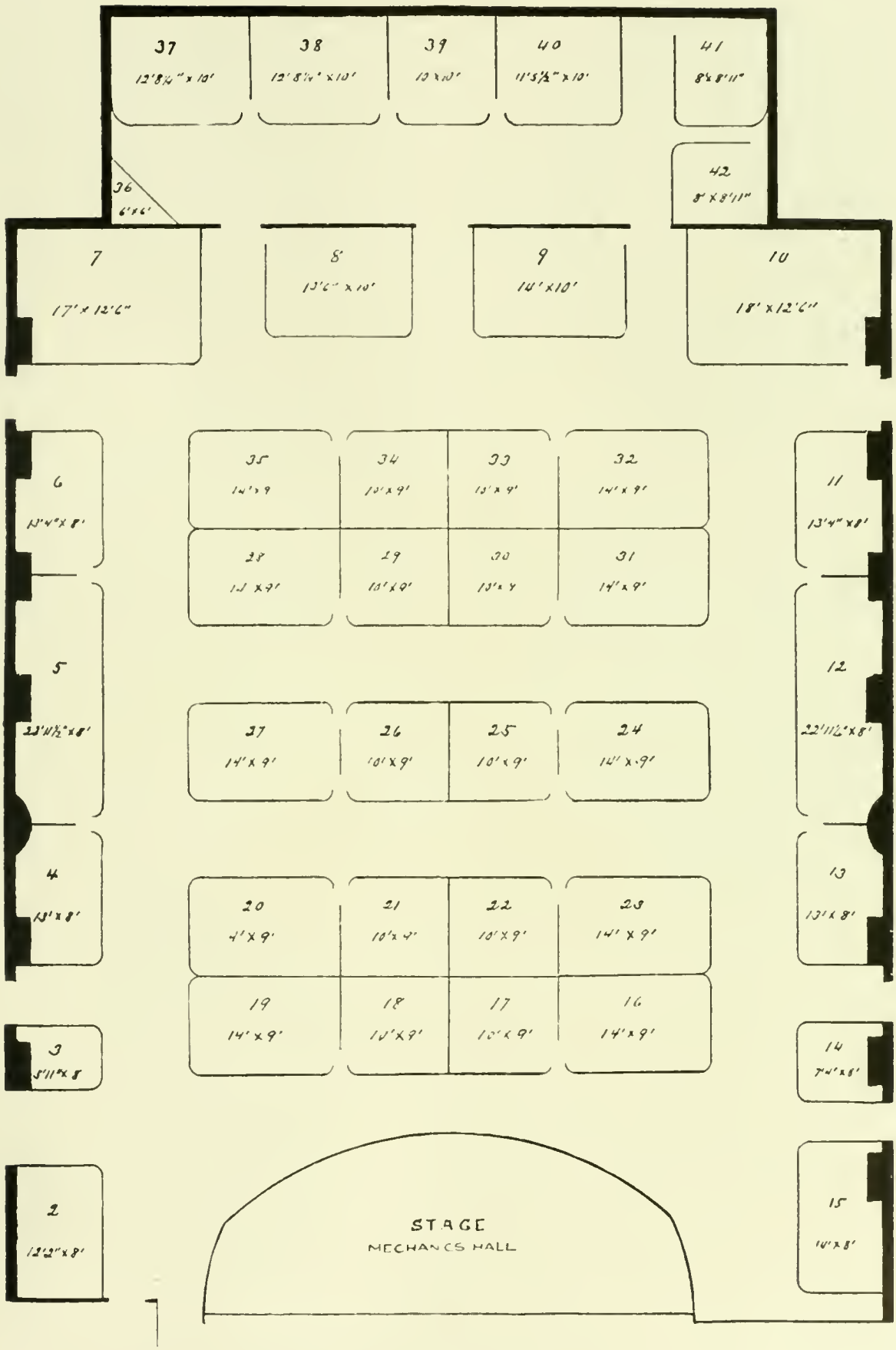


DIAGRAM OF MECHANICS HALL.—FOR LIST OF EXHIBITORS SEE NEXT PAGE

DANIEL E. DENNY
President Mechanics Exposition

The musical side of the show has not been neglected. The Worcester Woman's Orchestra will open the exhibition, Saturday evening, Feb. 5, and the Imperial Woman's Orchestra will furnish the music for the remainder of the Exposition. This orchestra will include three more pieces than last year and has been strengthened by the addition of several pieces from the Empire Woman's Orchestra. Mr. Campbell has secured the trombone soloist of the latter organization, also its drummer, players who are sought after by managers all over the country, and who will in Worcester for the first time play with any orchestra other than their own.

Every detail of the show has been carefully worked out, including the advertising. Newspapers, posters, window cards, stickers, circulars and special letters have all been pressed into service. One advertising method used by Manager Campbell that brought good results was a series of quaintly-worded postal cards that were sent to a regular list of manufacturers once a week for two months, urging them to take space and showing them why they should support this Exposition. A number of applications for space resulted.

The list of the attractions in both halls, with a diagram of the same, accompany this article. The numbers in the enclosed spaces correspond with the numbers opposite the exhibitors' names. By consulting this schedule every reader of this Magazine can ascertain the exact spot where the exhibit is located in which he is particularly interested.

At this writing every particle of space in the two halls is reserved and most of the exhibitors have been assigned their exact locations. The indications all point to the most successful and valuable and largely attended Exposition in the history of the Mechanics Association.

NAMES OF THE EXHIBITORS AND LOCATION.

1. Worcester Electric Light Company.
2. E. B. Luce.
3. Worcester Board of Trade.
4. Office Specialties DeLuxe Company.
5. Hammond Clothing Company.
5a. Crowfut Krapp Company.
5b. Everwear Hosiery Company.
6a. H. R. Hoyle.
6b. Oakley Steel Foundry Company.
7. Hill Dryer Company.
8. Union Water Meter Company.
9. Duncan & Goodell Company.
10. Prentice Brothers Company.
11. Worcester Mailing Company.
12. Worcester Elastic Stocking & Truss Company.
13a. Wm. J. Smith & Company.
13b. Colton Combination Tool Company.
14. Wells Chemical Bronze Works.
15. Charles T. Stevens.
16. Chandler & Farquhar.
17. Box Factory.
18. Box Factory.
19. Coates Clipper Manufacturing Company.
20. Brierly-Lombard Company.
21. International Correspondence School.
22. White & Bagley Company.
23. Graton & Knight Manufacturing Company.
24. Sherman Envelope Company.
25. Sherman Envelope Company.
26. R. E. Kidder.
27. R. E. Kidder.
28. Norton Grinding Company.
29. H. G. Barr.
30. William T. Carroll.
31. W. H. Leland & Company.
32. W. H. Leland & Company.
33. Crompton & Knowles Loom Works.
34. Crompton & Knowles Loom Works.
35. Norton Company.
36. Fowler Manufacturing Company.
37. John Hanson.
38. Reserved.
39. Standard Rug Company.
40. Central Supply Company.
41. Stewart Boiler Works.
42. H. B. Ward.
43. H. E. Crandall.
44. G. E. Stimpson Company.
45. Coghlin Electric Company.
46. Coghlin Electric Company.
47. Coghlin Electric Company.
48. O. S. Kendall & Son.
49. Schervee's Art Shop.
50. Singer Sewing Machine Company.
51. Wm. F. Russell Company.
52. Alsten & Goulding.
53. Miss E. F. Rollston.
54. M. S. Wright Company.
55. Ross Brothers.
56. Ross Brothers.

CHARLES H. NORTON
Vice-President Mechanics Exposition

57. A. K. Gammon.
58. Ella Pratt Bonner.
59. Burlingame Telegraphing Typewriter Company.
60. Reserved.
61. Royal Typewriter Company.
62a. Boston Lightning-rod Company.
62b. Michael Bliss.
63. Blake Signal & Manufacturing Company.
64. W. D. Kendall Company, Franklin Electric Company, Simplex Electric Heating Company and Holtzer Cabot Company.
65. General Electric Company, George H. Moseman and Weston Electrical Instrument Company.

Tait Brothers—Ante-room.
Leicester Polar Spring Company—Ante-room.
Worcester Pressed Steel Company—Ante-room.

An Old-World Lesson in Public Convenience

A contributor to the Worcester Magazine, who takes a warm interest in all that makes for ideal civic conditions in the Heart of the Commonwealth, sends us the following suggestion for an improvement in identifying the street cars of this city, particularly during the heavy storms of the winter season:

"Of the many things the New World may learn from the Old, one is constantly presenting itself to my mind as I go about Worcester. That old Rome, dead and buried several times over, can possibly give points to us Yankees of the Heart of the Commonwealth seems preposterous. Nevertheless the Eternal City has for us, among many others less pressing, one highly practical and important suggestion, even along the line of street-car management, where we may have thought ourselves particularly qualified to enlighten other lands.

"How we in Worcester, even in broad daylight, strain our eyes in trying to interpret from the sidewalk the signs on the street cars! And in the evening we are utterly helpless, until we advance from the curb-stone through rain and mud and slush, at the risk of life and limb, only to find that our opportunity for shelter within the car is not yet. It could hardly affect materially the Consolidated dividends to provide the cars with the Roman device of large, conspicuous numbers to designate the different car lines. With these, perhaps nearly a foot square, placed high on the car front, a would-be passenger can distinguish the car he wishes to take, from a point twenty rods away, and can await his turn under a hospitable doorway, protected from wet and cold, and calm in mind. This Old-world feature of public convenience is so simple and so helpful that I constantly wonder at our patience under the blind and bewildering method in use here. To learn the numbers assigned to the various lines of cars would not over-tax the intellect, even if posters were not placed in the cars and in other conspicuous places, and if guide-cards were not provided for the pockets of patrons as aids to the memory.

"The suburban lines are already to some extent distinguished by the colors of the cars, but the inconvenience to which we are subjected in the case of in-town lines seems entirely needless. There is no valid objection whatever to the system of numbers, or of letters if preferred, and so much to recommend it, that its immediate introduction seems more than desirable."

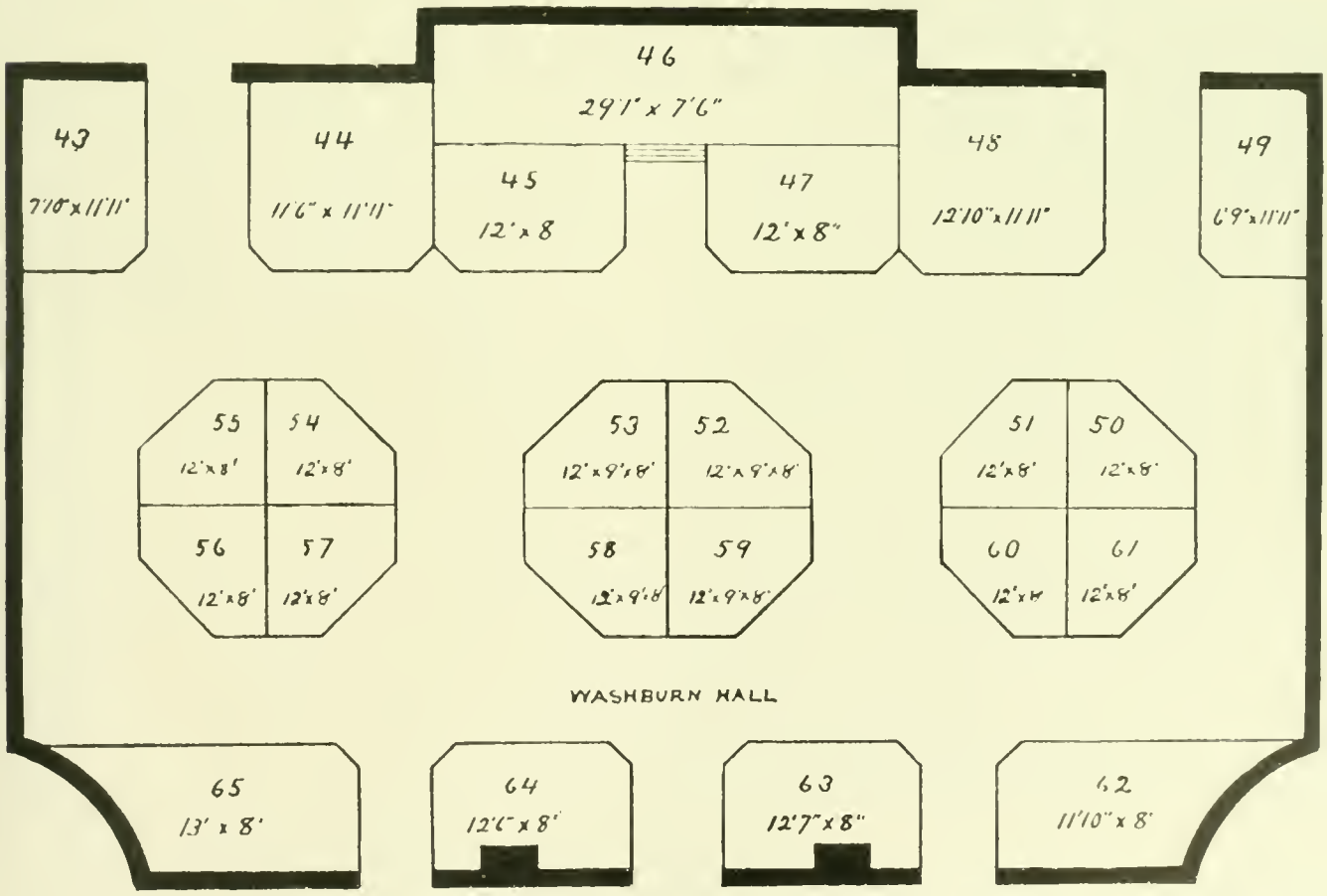


Diagram of Washburn Hall.

Worcester Polytechnic Institute's Claims

The Scholarly, Lucid and Convincing Argument of Hon. Charles G. Washburn, Before the Massachusetts Legislature, for an Increase in the State's Annual Grant to $20,000

THE Worcester Magazine is very glad to publish in this issue the argument delivered Jan. 28, before the Committee on Education of the Massachusetts Legislature, in favor of an increase in the annual grant made to the Worcester Polytechnic Institute from $10,000 to $20,000. This argument, made by Hon. Charles G. Washburn of this city, and a member of this Board, is one of the most lucid, scholarly and valuable expositions of the claims upon the State of this excellent institution ever presented. The argument, practically in its entirety, appears herewith:

"Mr. Chairman and Gentlemen of the Committee:

"I appear before you in behalf of the bill providing for an increase in the amount paid annually by the Commonwealth to the Worcester Polytechnic Institute, in consideration for which the Institute maintains forty free scholarships for the benefit of nominees of the State Board of Education. The amount is now $10,000, and we ask that it be increased to $20,000.

"It may aid in a better understanding of this appeal if I briefly state the conditions under which the Polytechnic Institute was established, and the gradual development and present condition of its financial resources.

"In 1865 John Boynton, then a resident of Templeton, in Worcester County, gave the sum of one hundred thousand dollars for the endowment of a school, for 'the instruction of youth in those branches of education not usually taught in the public schools, which are essential and best adapted to training the young for practical life.' He offered to locate this school in the city of Worcester 'provided the citizens of Worcester should furnish the funds necessary to purchase a lot, and erect a suitable building or buildings for its accommodation.'

"This condition was most generously met by the gift of a commanding location for the school by a prominent citizen of Worcester, and upwards of sixty thousand dollars contributed by citizens of Worcester and Worcester County to cover the cost of the first building. As indicating the general public appreciation of the plan by all classes of our citizens, it may be mentioned that among the contributors were operatives in twenty of the manufacturing establishments in the city.

"At about this time, another citizen of Worcester County largely interested in manufacturing in the city of Worcester, who had for years entertained the idea of establishing a school for the scientific education of mechanics, presented a completely equipped machine and carpenter shop, which he endowed with a gift of fifty thousand dollars, in addition to the sum of five thousand dollars given to provide working capital for the first year.

"There was thus devised a unique scheme of technical education, combining with the studies ordinarily pursued in technical schools, work in a shop run upon a commercial scale, and producing articles to be sold in the market.

"Unsuccessful experiments in thus combining the practical with the theoretical had previously been made in Germany and in Austria; but what was at first an experiment in the Worcester school has proved a complete success, attracting the attention of educators in all parts of the country, and furnishing a model after which several schools in this country have been patterned.

"The formulæ discussed by the students in the classroom are applied by them in the working out of proportions and making of drawings, which form the basis for the completed machine constructed in the shop.

"The endowment of the school has gradually grown until, at the present time, the value of the real and personal property somewhat exceeds the sum of $1,450,000, of which amount $602,892 yields an income.

"A condition of the Boynton foundation was that students, residents of Worcester County, should receive instruction without charge; and this condition is complied with to the extent of the income derived from this fund. This affords thirty-five free scholarships; and, in compliance with the condition attaching to the appropriations by the State, forty students selected by the Board of Education, who are residents of Massachusetts but not of Worcester County, may receive free tuition. Free tuition is also provided to the extent of the income furnished by the gift of Hon. George F. Hoar, for students from that part of Norfolk County, namely: from the towns of Foxboro, Bellingham, Franklin, Medway, Millis, Walpole and Wrentham, which formerly were part of the Ninth Congressional District, so that the school, at the present time, has about seventy-five free scholarships.

"Of the property of the school, amounting in value to $1,451,520, $1,251,520 has been contributed by citizens of the city and county of Worcester and $200,000 by the Commonwealth.

"The following is a statement of the contributions heretofore and now being made by the Commonwealth in aid of the Institute:

1869. $50,000 upon condition that twenty free scholarships should be maintained. This sum was expended upon the plant.

1886. $50,000 without condition, which has been made a part of the endowment known as the 'State Fund.'

1894. $100,000, paid one-half in 1894, the other half in 1895; expended on buildings and equipment.

1896. An annual payment of $3,000 from September 1, 1896, conditioned upon forty free scholarships, including those provided for in the appropriation of 1869.

1899. An annual payment of $6,000 (in place of $3,000) from September 1, 1899, to cover the forty free scholarships provided for in the Act of 1896.

1905. An annual payment of $10,000 (in place of $6,000) from September 1, 1905, to cover forty free scholarships.

"The Commonwealth from the earliest times has aided the cause of education, but has now withdrawn pecuniary aid from all the higher institutions of learning excepting the three schools within her borders which are occupied with the problem of technical education, namely, the Massachusetts Institute of Technology, the Agri

cultural College at Amherst and the Polytechnic Institute at Worcester.

"The Worcester Polytechnic Institute has received from the Commonwealth up to the present time $285,000. The annual payment of $10,000 does not cover the cost to the Institute of the forty free scholarships which, including the interest on the plant, amounts to about $12,000 annually. The number of students in the Institute is 515, and of its graduates 465 are at present actively engaged in the industrial life of the Commonwealth.

"Our income is insufficient to meet the expenses of the Institute. The total receipts for the year ending April 30, 1909, were $147,237 and the total expenditures $169,119.

"While the price of tuition has not been changed for many years, the cost of instruction has enormously increased. The wonderful improvement in methods, especially in applied science, which the last decade has witnessed, has compelled the Institute to expend large sums in providing suitable appliances and facilities for such instruction. It has been, throughout its existence, distinguished for the practical character of its teaching. Its students are brought in constant contact with real problems, such as are of every-day occurrence in practical life, and its experimental work is almost invariably done on a scale correspondingly large. While this sort of teaching is everywhere admitted to be the most effective, it is also by far the most expensive. Within four years the Institute has expended over $300,000 in the building and equipment of its laboratories. As a necessary result, the actual cost of instruction per student is very much in excess of the tuition. The cost is constantly increasing, not only on account of the increasing cost of the necessary instruments, appliances, etc., but also because modern methods, especially as they have developed at the Institute, are not applicable to large groups of students. The individual is more carefully looked after, and this necessitates a large increase in the number of instructors and in equipment.

"About four hundred and sixty-five of our graduates are at present in the State of Massachusetts, actively participating in the maintenance and extension of her industrial interests. Many of them fill positions of great responsibility, and the majority of them are closely in touch with, and in large measure responsible for, the material progress of the State. It is difficult to estimate even approximately the value of these men, or rather of the training which they received at the Institute, to the Commonwealth.

"An interesting statement made some time ago, in an address by James M. Dodge, then President of the American Society of Mechanical Engineers, which is confirmed by the experience of our own graduates, reveals the fact that the average annual salary of the technical trained man is over $2,150, and for the non-technical but trade-trained man, $790, so that the gain in average annual income due to a technical training is over $1,360. This amount capitalized at four per cent. gives to a man receiving a technical training a potential increase in value of $34,000. There are now engaged, as already stated, in active life in this Commonwealth 465 of our graduates who represent directly and indirectly a wealth-creating power represented by a capitalization of approximately $16,000,000. This represents merely a capitalization of the increased earning power of our graduates and takes no account of the enterprises which they have developed and which they direct, which would easily make the pecuniary measure of the contribution to the world's assets a much larger sum, against which may be set the $285,000 received from the Commonwealth. Then, too, the welfare of the State has been greatly promoted by those graduates who have not remained in Massachusetts, but who are to be found in nearly every State and Territory of the Union, and in all of the more important countries of South America, and of Europe, Asia and Australia. Wherever they are, they are in a sense exponents or representatives of Massachusetts machinery and machine products, with which they became familiar during their course at the Institute.

"The continued prosperity of the Commonwealth must depend in the future more largely than ever before on the thorough technical training, skill and inventive ingenuity of her sons, for the relatively growing cost of power and crude material is an adverse condition of serious moment. It is only by further encouraging in every possible way the development of these qualities that she can avoid being overtaken in the near future and at last distanced in the race for industrial supremacy.

"The Worcester Polytechnic Institute respectfully invites attention to the contribution it has already made to the material welfare of the State and to the possibilities of the future, if it is afforded a reasonably liberal support. It hopes that a fair consideration of the facts briefly set forth above will result in favorable action upon the petition which it now submits to the Committee."

Commercial Organization News

The Philadelphia Chamber of Commerce advocates a loan of $3,000,000 to make harbor improvements in that city.

Sioux Falls, South Dakota, has adopted as its slogan, "The Biggest Little City in the World."

The Cleveland Chamber of Commerce has refused to endorse the Society for the Prevention of Cruelty to Animals in that city.

J. F. Youse, a railroad man, formerly of the Hocking Valley line, is the new secretary of the Toledo, O., Chamber of Commerce. Toledo is proud of the fact that twenty-two railways pass through that city, and is anxious to secure a slogan.

It is believed that Miss Nell Potts, president of the Board of Trade of Fayette, Mo., is the only woman in the United States holding such a position.

The Portland, Ore., Commercial Club will give $5000 for the best newspaper and magazine articles that can be written booming the Northwest. The writer of the best article will receive $1000; others smaller sums.

J. F. Callbreath has been elected secretary of the Denver Chamber of Commerce, vice W. F. R. Mills, resigned. The salary of the office has been increased from $2000 to $3000.

The furnishings of the new Salt Lake City Commercial Club will cost $60,000.

The Bisbee, Ariz., Board of Trade has secured a reduction of twenty-five cents a hundred upon all classified freight shipped into that town from El Paso, Tex. Bisbee is a copper town, in which much Eastern capital is invested.

Memphis, Tenn., has caught the contagion and is to raise $50,000 to advertise that town through the medium of the Business Men's Club.

Editorial Reflections

"Decadent" New England

A western magazine devoted to the development of the commercial organizations of this country remarked editorially in its January issue, anent some activities on the part of the Boston Chamber of Commerce, "that Town Development has long wanted to see New England wake up and get down to business."

Similar expressions are encountered almost every day, and all too frequently they crop out in the New England newspapers themselves.

It is from utterances of this sort, based on ignorance, misrepresentation and prejudice, that the talk about "decadent New England" got its start. To date, New England has been too proud, too self-satisfied and too indifferent to brand the statement as an untruth, but the time has come when it should do so.

For such statements hurt.

The facts are all the other way and are known to every thinking man in these six states. Take the matter of commercial failures, always a good barometer of business conditions.

In every one of the New England states the number of failures last year was less than in 1908, and in Massachusetts the number of failures last year was smaller than in any of the preceding seven years. No section of the United States makes a better showing and no state in the forty-six is able to make a showing comparable with that made by this State.

The total volume of exchanges in Boston for 1909 reached $8,440,382,263, and its postal receipts were $5,748,098, an increase of almost 100 per cent. in ten years, during which time its postal stations have been increased from twenty-seven to sixty-two. The imports at Boston for the eleven months ending Dec. 1 amounted to $114,473,253, an increase of $34,000,000 over the corresponding period of 1908. This compares favorably with San Francisco, for example, whose total imports during the same eleven months were $51,000,000, or not quite one-half the gross reached by the Hub.

In number of cotton spindles, investment of capital, operatives employed and value of output, New England equals and slightly surpasses all the rest of the United States put together.

The total value of the shoe manufacturing industry of the country is now rising $350,000,000, and more than fifty-six per cent. of that whole amount is contributed by New England.

Providence and the Attleboros manufacture more jewelry than New York and Newark by five millions of dollars annually, and Connecticut helps further to swell this total. In paper making, New York alone excels Massachusetts and Maine, and so it goes.

The largest factory for the manufacture of women's shoes in the world is located in New England, and the value of the output of the shoe factories of this State alone, during 1908, was $170,000,000.

Not only is New England the great boot and shoe centre of this country, but it is the textile centre as well. The contribution of the past twelve months in this line alone, in New England, was twenty-two new cotton mills, nineteen woolen and worsted mills and seven knitting mills. Massachusetts herself furnishes one-third of the whole number of cotton spindles that are whirling in this nation this minute. Furthermore, for good measure Massachusetts furnishes one-fourth of the woolen mill capacity and one-half of the worsted industry of the nation.

In all, New England has $650,000,000 capital invested in textile manufacturing, and the little State of New Hampshire, the laughing-stock of these western wiseacres, boasts today, as it has for many years, the largest cotton manufacturing plant in the world. In this one line these six states produce $500,000,000 worth of goods annually. This single item compares favorably with the products of the Inland Empire tributary to Tacoma, Spokane, Seattle and Portland, for example, about which the East has heard a good deal from time to time. The total of the mineral output of this region as well as its dairies, wheat crop, lumber cut, live stock and poultry, fruits, farm and garden truck, reached last year $188,000,000, a very respectable sum for a country as large as New England, but hardly what this section would expect to produce in the same area.

As a matter of fact, Worcester County alone produced $146,000,000 worth of goods, last year, and never turned a hair doing it. Nor did it think it necessary to hire a brass band to advertise the fact. And what is true of Worcester is true of Hartford, Providence, Springfield, Portland, Manchester, Burlington and a score of other smaller industrial bee-hives.

Town Development is printed in Chicago, which is generally regarded as a pretty live town, and it is one; but Chicago's manufacturing output last year showed a falling-off of $29,737,500 from 1907, and its wholesale trade only showed an increase over 1908 of $5,258,150. It would appear that a closer examination of the industrial situation nearer at hand might prove beneficial to some western newspapers, among them Town Development.

The Genius of the Playground Movement

Augustine calls youth "the flower of our days;" Cicero calls it "the blessed time," and Seneca, "the best of life." The Elizabethan writers often speak of "the primrose of our youth." It is indeed the golden age. The seasons return again and again and the flowers change with the months, but youth comes twice to none.

Life itself is a tragedy from the overture to the final drop of the curtain, but fortunately the plot is not developed enough in the opening acts to be terrifying either to actors or audience. As the play progresses, however, the action becomes more grim until Death, the stage carpenter of the centuries, sets the final scene, 'mid crape and gloom and tears.

As humanity has groped upward out of darkness into light, it has instinctively placed more and more accent upon the now, and less and less emphasis upon the then. The desire to spend an eternity in bliss has been replaced very largely by a sincere determination to wrest from time a brief period of enjoyment. The next world may be full of joy, but this world does not care to wait for it. It desires to secure its pleasures here in order to make sure of them.

Back of the modern playground crusade is the fixed resolve on the part of the race to increase by this means as well as every other the sum total of human happiness, and whether the men who launched this movement are conscious of it or not, that determination has given the movement its amazing vitality.

It is said that the republic spells opportunity, but opportunity herself oft proves a fickle jade. Mr. Dooley, speaking recently of this elusive caller at men's gates, remarked: "Opportunity knocks at iv'ry man's dure wanst. On sum men's dures it hammers till it breaks down th' dure and then it goes in and wakes him up if he's asleep, un' aftherwards it wurruks f'r him as a night watchman. On sum men's dures it knocks and runs away, an' on th' dures of sum men it knocks, an when they cum out it hits them over th' head with an axe. But iv'ry man has an opportunity."

It is the fear, and the well grounded fear too, on the part of most of us that we shall find ourselves in the last named class so aptly described by Mr. Dunne, that gives the playground movement its great attraction.

There is no royal road to wealth in America any more than there is to learning, and the masses are coming to realize more and more that the only desirable thing left them is the happy, healthy, care-free period at the very dawn of existence. The rest is a treadmill from which there is no escape.

There is a joy in work well done; there is a pride and satisfaction in being elevated above one's fellows; there is a sense of power in the possession of great wealth, but there is nothing on earth that can duplicate the artless happiness of youth.

Our industrial civilization has robbed us of our natural freedom, habits and frankness. It has put dissimulation at a premium, honesty at a disadvantage and made absolute, continuous, unvarying truth-telling incomprehensible to modern society.

There remains but one last stockade still unsubdued by the forces that see in humanity only so many machines capable of grinding out an ever-increasing product. Behind that stockade stand the youth of this country. Many of them are unable to help themselves, and all of them deserve the best that life can give if they are to grow up into healthy, happy, efficient citizens. The child labor laws will do something for them, the reformatory and moral influences of the country will do something more, but if they are to have the chance that they ought to have they must have not only immunity from work and protection from vice, but they must have intelligent, judicious, supervised play.

There is no doubt but what their life work, when they come to enter upon it, will be carefully enough supervised. There is an equal necessity that their play years shall be equally as well conserved.

A nation with a happy childhood will have laid the foundation for an effective manhood and womanhood. A nation with an unhappy childhood will have injected the poison into its veins that will develop a rebellious, bitter, inefficient after-life. For example, compare the United States and Russia. The playground movement is not a fad or a foible; it is an economic necessity for the race, and as such it deserves the coöperation and support of the American people if this nation is to become, as we hope it will, the workshop of the globe.

Worcester's Interest in the Census

The next census is a matter in which Worcester has a very vital interest. The government has never prepared itself in advance for so valuable and far-reaching an inquisition into the business as well as the population of the country as it has this year. Every fact of interest and value ascertainable will be tabulated, and upon the fruits of this inquiry the prosperity of many American communities, during the next ten years, will very largely depend.

The tendency all over this country is toward the cities, and the larger the city the more it magnetizes the attention and business of the country. New York has never grown so rapidly as it is growing now, and the same is true of Chicago, St. Louis, Boston and all our other great towns.

There is no question but what Worcester suffered from the census taking of 1905. Making all the allowances possible for exaggerations and misrepresentations, there remains and always has remained a feeling in the minds of Worcester citizens that all our people were not counted at that time, and we feel that this is none too early to call the attention of the authorities to the fact that we should prefer not to have the experience of five years ago duplicated.

Worcester does not ask to have its population increased by a soul above the number to which it is legitimately entitled, but it should insist, and we believe that it does insist, that every soul within its borders *shall* be counted, and that there shall be no necessity for a revisit by the enumerators to correct mistakes or verify their original footings.

Worcester is today the third largest city in New England, and upon the results of the census taking of this year may depend, very largely, its future growth.

Nothing less than an accurate and thoroughly reliable enumeration of all our people will therefore satisfy the varied interests that are represented in this city.

We believe that the curve of our population is constantly rising and the chart for 1910 ought to show it, and we believe will show it, at a higher point than it has ever reached before in a statistical table. We trust that our people will co-operate with the census enumerators in every way possible, and that having done so they will then hold them to a rigid accountability for the figures they furnish.

If the census taking of 1905 did do Worcester an injustice, the time has arrived to rectify it. A year from now will be too late either to complain or protest.

The Polytechnic Institute Grant

The Worcester Magazine esteems it an honor as well as a very great pleasure to give space in this issue to the splendid argument made before a committee of the Massachusetts Legislature, in favor of an increase in the annual grant to the Worcester Polytechnic Institute from $10,000 to $20,000. If any institution in the State is deserving of State aid this institution is. The annual value of our manufactures, nationally, now reaches the enormous total of $1,124,000,000, and Massachusetts contributes her share of this great sum. That this country may continue to develop industrially is certainly the wish of every wise man, and in order that it shall do so it is absolutely necessary that we shall have men technically trained. It is almost inevitable that colleges, such as the Worcester Polytechnic Institute, with their comparatively limited appeal, will find it difficult if not impossible to turn out such men, if the State, the great beneficiary from its operations, does not assist in bearing its burdens.

WORCESTER BOARD OF TRADE

EACH FOR ALL ALL FOR EACH

11 FOSTER STREET
WORCESTER MASSACHUSETTS
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

FRANK S. BLANCHARD, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
CLARENCE W. HOBBS, JOHN J. POWER, HERBERT H. FAIRBANKS,
JOHN W. HIGGINS, EDWARD J. CROSS, WILLIAM WOODWARD,
WINTHROP HAMMOND, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
WILLIAM FORSBERG, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.

Clerk of the Corporation, WILLIAM H. SANFORD. *Auditor*, H. WARD BATES.

Membership Committee.

E. BRUCE DUNN, MARK F. COSGROVE, GUSTAF A. BERG.
BENJAMIN B. SNOW, HARTLEY W. BARTLETT

Chairmen of Standing Committees.

Advisory: RUFUS B. FOWLER.
Arbitration: CLARENCE W. HOBBS.
Building Laws: EDWARD J. CROSS.
Education: JOHN W. HIGGINS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: WILLIAM FORSBERG.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: ARTHUR C. COMINS.
Mercantile Affairs: WINTHROP HAMMOND.
Municipal Affairs: CHARLES L. GATES.
New Enterprises: WILLIAM WOODWARD.
Publication: GEORGE F. BOOTH.
Public Health: ARTHUR O. YOUNG.
Statistics and Information: MARCUS L. FOSTER.
Taxation: HERBERT H. FAIRBANKS.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

January in the Board of Trade

The month of January brought its full quota of duties to the Secretary of the Worcester Board of Trade, and the office force has certainly been as busy as bees, during the last thirty days, in attending to the routine matters that month by month increase and multiply with the gaining membership and growing influence of this organization.

It may be well to remember that this Board in two years has increased its membership by 300 souls. No commercial organization in New England, outside the Boston Chamber of Commerce, has during the same period made anything like the same progress, and the increase in the business of the Board has kept pace steadily with the growth in membership.

The Worcester Board of Trade from the very start has been exceedingly fortunate in its presiding officers. The long list of men who have stood at the head of this organization during the last twenty years and who have laid bread and deep its foundations have made its present growth not only possible but inevitable. The Board has always stood for the best things in this community, and it has simply strengthened its position with the passing years until membership in it has come everywhere to be recognized as a badge of good citizenship. If the Board had not been well officered and wisely managed in the past, it would not today enjoy the confidence and support of the community it does. It is the hope and the intention of the present officiary to justify the confidence that Worcester has displayed so practically in the past two years in its ability to serve the community.

THE CREDIT GUARANTY FUND.

Possibly the most effective step taken in this direction in recent years is the creation of a credit guaranty fund, authorized at the January meeting of the Directors, for the purpose of assisting worthy Worcester industries that for any reason need temporary aid.

This plan does not contemplate selling stock for new industries desiring to locate here, nor for the sale of stock for plants already in operation here; neither is it intended to bolster up failing industries. It was inaugurated simply and solely for the purpose of extending the credit accommodations open to going concerns that are in need of temporary loans.

There are many worthy Worcester industries that, for reasons that do not reflect upon them a particle, are unable at one time or another to secure the accommodation they need at the banks. This Credit Guaranty Fund will be administered by three attorneys in fact, who will superintend the investigations that will be made of the financial condition of prospective borrowers, and no money will be loaned except on their approval.

It is expressly provided that no more than ten per cent. of the fund shall be loaned to any one borrower and there is another provision that no more than eighty per cent. of the fund shall be loaned in all.

The amount of the Guaranty Fund was fixed at $200,000, and the Secretary is engaged in securing contributions to complete it at this time. The Directors are all co-operating in the matter, and it is expected that the amount in question will be pledged very largely, if not entirely, by the members of this Board.

It is to be understood that no money has to be paid in by anybody unless after the fund is organized there should be a loss, in which event the subscribers will pay only their proportionate share. For example: if a man pledges his credit for $2000 and there is a loss of $5000 he will be called on to pay one one-hundredth of $5000, or $50.

It is said that in Williamsport, Penn., where this plan originated, there has been in the whole nine years that it has been in operation but one loss, and that was for $3000. In the meantime the fund has been the means of bringing into that city $2,000,000 worth of capital. The banks of Williamsport work very closely with the Board of Trade, and the result has been extremely beneficial both to the banks and the community.

Easton, Penn., a little town of 28,000 inhabitants, is engaged in raising a fund of a similar type and at the last meeting of the committee in charge it was stated that they had secured pledges for $577,000, and that the total would reach $600,000 by Feb. 1. They started out to raise $200,000, and the amount has been oversubscribed three times. It would seem if Easton could do that, that Worcester ought to be able to raise one-third that sum.

The plan has received the approval of the banks of Worcester. Its details have been very carefully worked out by a committee headed by Mr. William Woodward, and every man that has investigated it is confident that it will meet a long-felt want in this community.

This plan will undoubtedly serve as the leading achievement of the very businesslike and practical administration of the present President, Mr. Charles T. Tatman. It has been very close to his heart from its inception and he was the first man to sign the subscription paper, launching the movement.

A PLAYGROUND ASSOCIATION.

Another matter that is in process of incubation in the Board, at the present time, is the forming of a Playground Association.

This city has not lived up to its privileges in that respect. The Woman's Club has done splendid work in

the direction of fostering playgrounds, but there is necessity of co-operation on the part of both sexes and all classes if Worcester is to take the place she deserves to hold in this regard. It is therefore purposed to organize an association here whose principal business it shall be to develop supervised playgrounds and to create a body of public sentiment great enough to see that sufficient appropriations are made to ensure their establishment and maintenance.

This movement is purely philanthropic and nonsectarian, and into the body of its membership this Association will welcome the men and women of every nationality and of all classes—the rich and the poor, the high and the low, the fortunate and the unfortunate, the representatives of every religion and of none. The movement is as untrammeled as play itself, and it is hoped and believed that the response on the part of the public will be as enthusiastic as the importance of the subject demands.

THE JANUARY DIRECTORS' MEETING.

At the regular meeting of the Directors, Thursday evening, Jan. 13, an act relative to the abolition of grade crossings, providing that cities and towns shall not be assessed for their elimination except under certain circumstances, was discussed and laid over until the next meeting.

This bill is being urged by the Mansfield, Mass., Board of Trade, and was introduced into the last Legislature and killed by that body.

The Directors went on record as approving the creation of a permanent tariff board, as recommended by the Boston Chamber of Commerce.

With reference to the operations of the Federal Excise Tax the following vote was passed:

Voted, that whereas the requirement contained in the sixth clause of the new Federal Tax Law [the publicity provision] may work hardship on private corporations, therefore be it

Resolved, That our Senators and Representatives in Congress be requested to assist in modifying the law in that respect.

In accordance with this vote, communications were forwarded to Congressman Charles G. Washburn, Hon Henry Cabot Lodge and Hon. Winthrop Murray Crane, and replies were received from all three gentlemen. Mr. Washburn promised to take the matter up and see if anything further can be accomplished. The two senators replied as follows:

"UNITED STATES SENATE,
January 18, 1910.

"*Mr. Herbert N. Davison,*
Secretary, Board of Trade,
Worcester, Mass.

"Dear Sir: Your letter of the 17th inst., is received. I note with interest all that you have written regarding the Corporation Tax Law and the action of the Worcester Board of Trade concerning it. The situation was such here, last summer, we had to accept this measure or one very much worse would have been enacted. The reports made under it will not be published, but kept in the Treasury, and used as a basis for the assessment of the taxes. I wish, however, that the law could be modified as you desire, but there seems to be no possibility of such action at this session of Congress. I shall keep in mind your views upon this matter.

"Very truly yours,
W. M. CRANE."

"UNITED STATES SENATE,
January 24, 1910.

"My dear Sir: I have your letter protesting against the publicity clause of the corporation tax amendment. I am glad to know the views of your organization on this matter, but I do not believe any changes will be made in the law at this session. The Bailey amendment, which you probably remember, had such strong support in both Houses that it was defeated only by the substitution of the present law, and I fear if the matter were reopened at this time, it would result in more drastic legislation. You may be sure, however, that any contemplated changes in the law would have my most careful consideration.

"Very truly yours,
H. C. LODGE."

There seems to be no reason why the corporation managers belonging to this Board should not write the Senators themselves, protesting against the publicity clause in question, if they desire to, and thus add to the sentiment against this feature of the bill, voiced by the vote of the Directors.

It remains to be added that the protest voiced by this organization is much milder than the appeals emanating from other similar commercial organizations. Among the more fervid have been several from western communities, which are generally regarded in the East as hopelessly anti-corporation in all their utterances.

The Directors at their meeting on the 13th voted to join the National Fire Protective Association, and literature of special interest to the members of this Board on related subjects bearing on fire protection, fire loss, etc., was ordered purchased. It is the hope of the Directors to make this Board a clearing-house of information on this subject and thus render it of still further value to all its members.

Communications on the subject of improved train service over the New York, New Haven & Hartford Railroad, and the establishment of a new station at South Worcester, were referred to the Committee on Transportation and Railroads, for investigation and report.

A communication was received from Hon. Charles J. Bonaparte, president National Municipal League, with reference to the work of that body, inviting the Board of Trade to change its membership to the contributing class. While no action was taken in that direction it may be a matter of interest to know that Mr. Clinton Rogers Woodruff, the widely-known Secretary of the League, has kindly consented to prepare an article for the Worcester Magazine, setting forth at length its work and its claims. It is hoped that Worcester people interested in the broad, general subject of civic betterment will read this article and avail themselves of the opportunity to enroll themselves among the League members.

THE SPOKANE RATE CASE.

Another meeting of the general committee of the Eastern commercial organizations interested in the Spokane rate case was held in New York, Jan. 27, and was attended by the President. A local committee of ship-

pers, consisting of Milton P. Higgins, H. W. Goddard, George F. Brooks, Walter M. Spaulding, Ernest P. Bennett and the President, *ex-officio*, has been appointed to act in connection with similar committees appointed from other cities to see if something cannot be done to prevent the injustice proposed by this rate case being consummated.

THE JANUARY SMOKE-TALK.

The January smoke-talk was held on the evening of the 31st, and proved a great success. The speakers were James L. Ewell and John D. Long of New York, and their addresses on "Our Export Trade," with special reference to the proposed ship subsidy, produced a profound impression.

For One Thousand Members

The Campaign by the Worcester Board of Trade Progressing Rapidly

The Worcester Board of Trade welcomes to its membership at the beginning of this new year eighty-one gentlemen, all but nine of whom have joined the organization in the last sixty days, and the majority of them since the first of December. These gentlemen represent every walk in life, and are the fruit of an energetic campaign by our president, our very efficient Membership Committee, and the auxiliary body of workers connected with it.

There are nearly two score more whose names have received favorable consideration and who will, upon payment of the initiation fee of $5, become active members of this body. The list of those just enrolled follows:

WILLIAM S. ABBOTT, Cost Accountant, American Steel & Wire Co., 94 Grove
BENJAMIN W. AYRES, Manager, Remington Typewriter Co., 55A Pleasant
W. A. BARROWS, Div. Agent, B. & A. R. R., 385 Main
CHARLES W. BARLETT, Commodore, U. S. A., 56 Cedar
ALEXANDER BELISLE, Fire Insurance, 405 Main
GEORGE E. BELISLE, Lawyer, 340 Main
W. LEVI BOUSQUET, Bus. Mgr., Belisle Ptg. & Pub. Co., 112 Front
WALTER F. BROWN, President, Baldwin Chain & Mfg. Co., 199 Chandler
ROCKWOOD H. BULLOCK, Insurance, 311 Main
EDWIN BUTCHER, Heddle Manufacturer, 4 Cheever
WILLIAM F. BRENNAN, Druggist (Hall & Lyon Co.), 10 Front
ALEXANDER H. BULLOCK, Lawyer, 340 Main
CHANDLER BULLOCK, Lawyer, 340 Main
JAMES W. BURKE, Lawyer, 340 Main
FREDERICK C. BUTTERFIELD, Clerk, Norton Grinding Co., Greendale
DANIEL P. CALLAHAN, Lawyer, 390 Main
D. W. CARTER, Assistant Secretary, State Mutual Life Assurance Co., 340 Main
MORTON H. DAVIS, Proprietor, granite and marble, Webster and Fremont
GORDON F. DOE, Carpenter and Contractor, 81 Harrison
MICHAEL W. DONAHUE, Purchasing Agent, Wire Goods Co., 28 Union
PHILIP H. DUPREY, Real Estate, 390 Main
CHARLES A. DREW, Supt. City Hospital, City Hospital
EVERETT W. DURGIN, Jeweler, 568 Main
GEORGE W. DAVIS, President and Treasurer, Southgate Woolen Co., 32 Southgate
FRANK M. ENSWORTH, Restaurant, 150 Front
EDWARD T. ESTY, Lawyer, 340 Main
THEODORE T. ELLIS, Owner, New England Fibre Blanket Co., 24 Washington Sq.
GEORGE F. FULLER, Secretary and Superintendent, Wyman & Gordon Co., 30 Bradley
WILLIAM C. FOLEY, Lawyer, 340 Main
LOUIS E. FEINGOLD, Lawyer, 340 Main
GEORGE C. GORDON, Mechanical Engineer, 30 Bradley
MALCOLM M. GRANT, Lawyer, 390 Main
EDWARD F. GREEN, Assistant Treasurer, Crompton & Knowles Loom Works, Grand St.
WILLIAM A. GAYLORD, Banker, 390 Main
ALFRED R. GRUNDELLE, Secretary, R. L. Morgan Truck Co., 677 Cambridge
EDWARD A. HACKWELL, Manager, E. A. Hackwell & Co., 390 Main
FRANK H. HANKINS, Professor, Clark University, 950 Main
JOHN H. S. HUNT, Lawyer, 390 Main
JOHN B. HAMEL, Grocer, 448 West Boylston
FREDERICK J. HILLMAN, New England Audit Co., 340 Main
WILLIAM FRANCIS HYDE, Teacher, South High
DAVID B. ISENBERG, Real Estate and Insurance 340 Main
ALBERT E. JEWELL, Groceries and Provisions, Proprietor, 570 Southbridge
HERBERT E. JACQUES, Paper Box Machinery, 93 Webster
GEORGE A. KEELER, Bay State House, Proprietor, 283 Main
CHARLES A. KABLEY, Real Estate, 340 Main
JOHN J. LINEHAN, President and Manager, Linehan Corset Co., 12 Austin
JOHN F. MCGRATH, Lawyer, 340 Main
JOHN H. MATTHEWS, Superintendent, Worcester City Missionary Society, 10 Elm
CHARLES C. MILTON, Lawyer, 340 Main
WALLACE T. MORLEY, Secretary, E. T. Smith Co., 203 Summer
JOHN H. MARTEL, Musician, 387 Main
JOHN W. MAWBEY, Register of Probate, Court House
E. C. MCWATTY, Sales Manager, Royal Worcester Corset Co., Standish Hotel
GILES S. PEASE, Chief Draftsman, Spencer Wire Co., 91 Webster
HENRY C. PAGE, General Manager, Worcester Consolidated Street Railway Co., 107 Main
PHILIP F. PFAFFMANN, Woolens, 1469 Main
OSCAR F. RAWSON, Cigars, Rawson Cigar Co., 391 Main
DAVID B. RICE, Oils, Pierce & Rice Oil Co., 554 Park Ave.
WALTER H. RICHARDSON, D. D. S., 390 Main
GEORGE G. RODGERS, Manager, Mercantile Agency, 390 Main
VICTOR E. ROCHELEAU, Electrical Contractor, 564 Main
WILLIAM H. SAWYER, JR., W. H. Sawyer Lumber Co., 66 Lincoln
LUTHER P. SMITH, W. H. Sawyer Lumber Co., 66 Lincoln
HERBERT O. STRONG, JR., Bookkeeper, W. H. Blodget & Co., 71 Park
JAMES A. SAXE, Lawyer, Court House
BERNARD SCHULTZ, Manufacturer Waists and Skirts, 52 Water
JACOB M. SCHULTZ, Manufacturer Waists and Skirts, 52 Water
ANDREW W. SIGOURNEY, Sales Department, Royal Worcester Corset Co., 30 Wyman
FRANS A. STENBERG, Treasurer and General Manager, Stenberg & Co., 390 Main
THOMAS H. SULLIVAN, Lawyer, 390 Main
MARVIN M. TAYLOR, Lawyer, 390 Main
JAMES THOMPSON, Manager, Whitcomb Envelope Co., 20 Salisbury
J. EVERETT TOOMBS, Dentist, 390 Main
JAMES R. TROLLOPE, Insurance, 311 Main
ERNEST H. VAUGHAN, Lawyer, 340 Main
A. EDWARD WARREN, Bond Salesman, Crocker & Fisher, 21 Fruit
CHARLES D. WHEELER, Physician, 18 Chestnut
H. EUGENE WATKINS, Dentist, 390 Main
WINFRED H. WHITING, Lawyer, 390 Main
BURTON H. WRIGHT, President, State Mutual Life Assurance Co., 340 Main

Board of Trade Notes

The Charities Endorsement Committee of the Youngstown, O., Chamber of Commerce finds its hands full in preventing the charitably inclined people of that city being imposed upon by fake solicitors.

The Montpelier, Vt., Board of Trade is discussing the matter of increasing the power facilities in that city.

Quincy, Mass., is considering the matter of forming a merchants' association.

The Business Men's Club of Cincinnati raised a subscription fund to give the poor children of that city a merry Christmas.

The Pittsburg Chamber of Commerce is going to survey the Pittsburg harbor on the Ohio River at its own expense. It had asked Congress for an appropriation of $50,000 for the purpose, but got tired waiting.

Local January Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

Local trade measured by the best tests continues in a healthy and active condition. In retail lines the customary dullness after the holidays was felt more or less.

Worcester bank clearings the past year showed a total of $86,992,687, compared with $76,189,380 in 1908, showing a gain of 14.2 per cent.

Failures for the month have been noticeably few and unimportant.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney.

Theo. Brown, Manure Spreader, No. 944,479.

The tail board and the rake are so mounted that they may be simultaneously swung into or out of operative position by the movement of a lever.

A. W. Beaman, Crank Handle, No. 944,534.

A crank composed of a crank handle comprising a hollow sheet metal body portion, a handle integral therewith, and a socket at the end of the body portion comprising two parts, an inner part integral with the body portion, and a ferrule about this inner part to strengthen that part.

Peter Welin, Automatic Musical Instruments, No. 945,883.

A self-centering and freely supported valve for instruments of this class, comprising a flat or disk-shaped body portion with valve faces on the upper and lower surfaces and a central bearing sleeve located entirely below the disk-shaped body extending down from the lower face of the disk, and chambered out to receive the end of the valve stem.

G. W. Bemis, Bellows Valve, No. 945,905.

A noiseless valve comprising a rigid support having perforations therethrough, a flexible sheet metal disk secured thereto and adapted to cover the perforations, said disk having radial slits from its edges toward the centre and having a continuous sheet of thin leather more flexible than the disk on the under side thereof free from the sections between the slits at their outer edges, and said sections having means near the centre for securing the leather thereto.

J. R. George, Gas Producer, No. 946,030.

A gas producer provided with a shell formed in three sections, and means for rotating the intermediate or central section, which is provided with a water pipe passing diametrically through the producer chamber and through the upper portion of the fuel.

To Advertise Portsmouth

The Portsmouth, N. H., Board of Trade and Merchants' Exchange is to issue a booklet setting forth the beauties of Old Strawberry Bank, as that town is poetically called.

Worcester Quotations

Furnished by Fisk & Robinson, Worcester, Mass.

January 22, 1910.

BANKS.	Bid.	Asked.
Mechanics National Bank	125	...
Merchants National Bank	167½	
Worcester National Bank	210	..
Worcester Trust Company	300	..
RAILROAD STOCKS.		
Boston & Albany	231	last sale
Boston & Maine common	148	last sale
Boston & Worcester Elec. common	..	11½
Boston & Worcester Elec. pfd.	15	.....
Fitchburg preferred	129	130
New England Inv. & Sec. pfd.	91	96½
New York, New Haven & Hartford	156	last sale
Norwich & Worcester	215	last sale
Providence & Worcester	270	last sale
Worcester, Nashua & Rochester	145	last sale
Worcester Railways & Investment	75	85
INDUSTRIAL STOCKS.		
Crompton & Knowles pfd.	147½	....
Denholm & McKay common	200	.....
Denholm & McKay pfd.	102	103
Graton & Knight Mfg. common	140	.....
Graton & Knight Mfg. pfd.	115½	117½
Royal Worcester Corset Co.	140	.....
United States Envelope common	52	54
United States Envelope pfd.	115	116
Worcester Gas Light	270	.....
Worcester Electric Light	.....	290
Wright Wire Company common	102	.. ..
Wright Wire Company pfd.	106	.....
BONDS.		
Amer. Writing Paper 1st 5's	88⅜	last sale
Boston & Worc. St. Ry. 1st 4½'s	98½	100
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5½	basis
Marlboro & Westboro St. Ry. 1st 5's	...	98
Norcross Brothers 1st 6's	97½	100
United States Envelope 1st 5's	101	102
Worcester Cons. St. Ry. 1st 4½'s	94½	....
Worcester & Marlboro St. Ry. 1st 5's	98	.....
Worcester & Southbridge St. Ry. 1st 4½'s	90	92

Current Events

Personal and General

Dec. 23. Fiftieth anniversary of Worcester Free Public Library.

26. Rev. Inman L. Willcox, for more than eighteen years pastor of Park Congregational Church, resigns to accept pastorate of the Congregational Church, Oxford, N. Y.

27. George A. Green, formerly yard master for the Boston & Albany division, accepts position as master of transportation of the Ludlow Associates.

29. James J. Holley resigns as assistant to the Superintendent of the Worcester Boys' Club, to become assistant to Mr. Stephen P. Streeter of Oakdale Training School for Boys.

31. Congressman Charles G. Washburn addresses the Board of Trade committee on legislation, on the federal tax on corporations.

Jan. 1. Trustees of the Worcester County Institution for Savings announce an increase in deposits of $865,000, making a total deposit of $21,355,618, with total assets of $23,145,770.

2. Worcester United Catholic Societies, a new federation to promote the interests of Catholics in Worcester, elect John F. McDermott, president, and Rev. Bernard S. Conaty, chaplain.

3. Announcement made that the weavers in the M. J. Whittall carpet mills will receive an advance of five per cent. in wages as well as the benefit of the fifty-six hour law.

Rev. W. J. Taylor, pastor of All Souls' Church, elected chaplain of the Worcester Continentals to succeed the Rev. John L. Sewall.

Reserve officer William J. Moore resigns from the police force.

4. Worcester Merchants Association elects the following directors for three years: Luther C. Brown, John P. Coghlin, Richard J. Healey, William W. Johnson and Wallace T. Morley.

Announcement made that Mr. Hugh Chalmers, president of the Chalmers-Detroit Motor Car Company, will speak at the annual dinner of the Merchants Association, Jan. 28.

5. Sparks from defective wire at St. Vincent's Hospital cause fire and damage estimated at $1,000.

Hon. A. S. Roe, Past Department Commander of the G. A. R., invited to be present at the dedication of the statue of Gen. Lew Wallace, in Statuary Hall, at the Capitol in Washington.

Dr. John W. Baird, assistant professor of psychology in the University of Illinois, elected to succeed Dr. Edmund C. Sanford in the chair of psychology at Clark College.

6. Dr. David Snedden, State Commissioner of Education, addresses a union meeting of the Worcester Board of Trade and the Public Education Association on "School Administration as Affected by the Size, Composition and Function of the Lay Boards of Education."

7. Salesmen and shop foremen of the Norton Company and the Norton Grinding Company guests at a banquet tendered by the united management at the close of the annual sales conference of the combined companies.

10. Rev. Dr. C. A. Barbour, associate secretary of the religious work of the International Y. M. C. A. Committee, addresses Worcester ministers.

Citizens' No-License Committee holds banquet in honor of Richard D. Murphy, secretary for the past two years.

Books of county treasurer show a balance for the year 1909 of $45,000.

Treasurer's report submitted at the annual meeting of the Worcester Firemen's Relief Association shows a loss of $751.22 over receipts for past year. There is, however, a balance of $27,074.32 on hand.

11. Representative Robert M. Washburn, of Worcester, introduces bill in the Legislature providing for paying the Worcester Polytechnic Institute $20,000 instead of $10,000, which is now paid for the maintenance of forty free scholarships.

Trustees of the Worcester School of Trades hear reports and elect officers. Total expenditures to date, $83,981.13; balance, $41,318.87.

12. Whitney valentine factory destroyed by fire.

New electric furnace of the American Steel & Wire Company, at the Quinsigamond Works, expected to refine 240 tons of steel a day, placed in readiness for wires of the Connecticut Power & Transmission Company.

13. Directors of the Worcester Board of Trade meet and vote to establish a guarantee credit fund of $200,000.

14. G. E. Duffy Manufacturing Company buys mills of the E. D. Thayer Company, including factory plant and tenement houses.

Gen. R. H. Chamberlain resigns as sheriff of Worcester County after seventeen years' service.

16. Benefit concert held in Poli's Theatre for family of Westell C. Kirk, killed at the recent Greendale fire.

The Geo. C. Whitney Company sends check for $150 to Firemen's Relief Association.

18. Rev. Dr. Henry Stiles Bradley installed pastor of Piedmont Congregational Church.

Comdr. Robert E. Peary addresses an audience of 1500 at Mechanics Hall.

Greendale Village Improvement Society celebrates fifteenth anniversary with addresses on the supervised playground movement.

At annual meeting of the State Mutual Life Assurance Company, Burton W. Wright is elected president, succeeding A. George Bullock, resigned.

Industrial Notes

Dec. 24. Warren Leather Goods Company award contract for an addition to their plant, 75 by 100 feet, to cost $50,000.

29. Holyoke Machine Company secures contract to furnish two turbine water wheel units for the Empire Electric Railway Company of Seattle. Each unit consists of four wheels and is calculated to bring the capacity of the plant up to 20,000 horse-power.

Jan. 1. E. D. Ward awarded a contract to build a three-story brick carriage factory and garage, 110 by 55, with an ell of one story, 113 by 30, to cost $25,000.

4. Announcement made that Norton Company has arranged for a long term lease of a special office, sales and display room building in the new machinery district of Chicago; the building to be of stone, two stories and basement, 25 by 125 feet.

6. Worcester Gear Works incorporated under a Massachusetts charter, with a capitalization of $5,000 in fifty shares of $100.

10. J. W. Bishop & Company awarded contract to build the new frame building for the Worcester Pressed Steel Company, of mill construction, two stories, 80 by 104.

13. Figures compiled by the superintendent of Public Buildings show that $80,000 was expended in Worcester in December, 1909, over December, 1908, in building operations.

City Hall Affairs

Dec. 23. At a union meeting of the Finance and Fire Department Committees of the City Council, it was voted to recommend an increase in firemen's pay of from 30 cents to 75 cents a day, according to rank.

Sub-committee on Finance of the School Committee recommends an increase in pay for night school teachers.

27. At closing meeting of the year, City Council passes order petitioning the Legislature to make changes in the city charter allowing election of a mayor for two years, and a Street Commissioner for three years. Present Board of Fire Engineers re-elected; Justice Arthur P. Rugg and ex-Mayor Philip J. O'Connell chosen trustees of the Free Public Library, and Louis H. Buckley and Thomas J. Lynch, trustees of the Worcester School of Trades.

City Treasurer DeWitt Clinton makes annual report to the City Council, summarized as follows: Balance in treasury, Nov. 1908, $346,794.75; receipts during the year, $5,367,945.73; payments, $5,299,497.73; balance in the treasury, Nov. 30, 1909, $415,242.95.

Jan. 3. Alderman George N. Jeppson re-elected president of Board of Aldermen, and Councilman Edward T. Esty president of the Common Council.

4. Central Supply Company awarded contract to supply the city 30,000 feet each of one-inch and one and one-quarter-inch wrought steel pipe, at $3.17 and $4.654 per hundred feet.

5. City Auditor Williamson submits estimate for appropriations for 1910 of $2,756,173.10.

10. At meeting of joint standing committees on streets, voted that the chairman introduce orders to the City Council calling for construction of Canal and Harding Streets, to cost $177,000.

11. Water Commissioner Batchelder reports a water supply for Worcester of 1,082,000,000 gallons, a gain over last week of 90,000,000.

13. Finance Committee of the City Council vote to introduce order to the Council asking for $100,000 to be expended in paying for the city's share in the abolition of grade crossings.

18. Mayor James Logan awards contract for the printing of city documents and reports to the Belisle Printing & Publishing Company.

Necrology

Dec. 26. Lyman F. Thurston, 44 Lovell Street, aged 68 years, found dead in snow drift, having lost his way.

Jan. 4. Frederick A. Strout of 7 Townsend Street, aged 62 years 6 months and 21 days, dies from arterio selerosis and cerebral hemorrhage.

7. Azro E. Waterman, of Boylston, aged 92 years 6 months and 22 days, dies of heart failure, on way to home of his daughter, Mrs. Henry H. Shurtlief of 43 Coburn Avenue.

12. Captain John A. Lovell of 5 Fairfield Street, aged 77 years 7 months and 11 days. Mr. Lovell was a veteran of the Civil War, having served in both the Sixth and the Thirty-fourth Massachusetts Infantry.

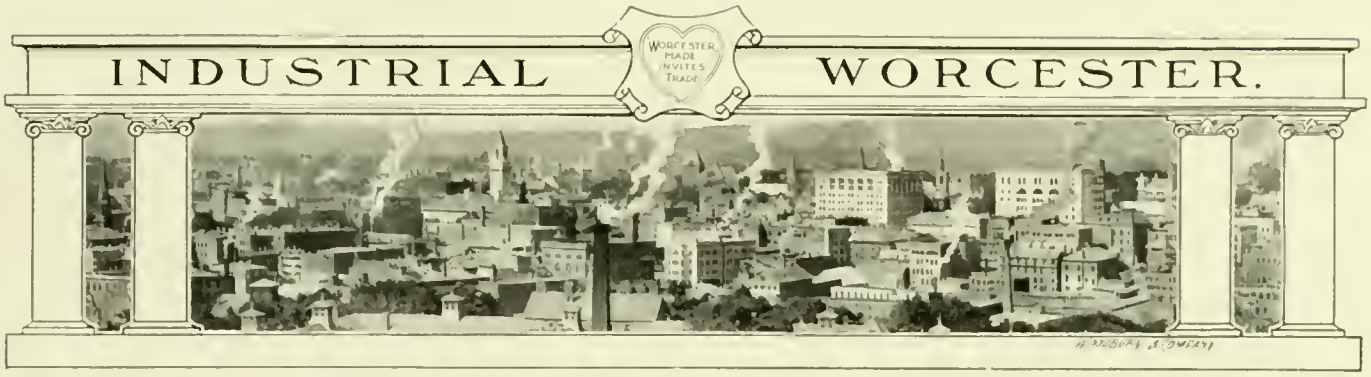
Jan. 18. Ernest I. Morgan of 1 North Parkway, aged 39 years 2 months and 19 days, dies from pulmonary tuberculosis. Mr. Morgan was a former assistant city solicitor and for three years was assistant district attorney.

Permanent Industrial Display

The Muncie, Ind., Commercial Club is discussing the subject of establishing a permanent display in its headquarters of goods made by the manufacturers of that city.

How Indianapolis Does It

A special train carrying none but Indiana manufacturers will leave Indianapolis Feb. 15 for a three weeks' tour of the southwest and Mexico, for the purpose of advertising the products of the Hoosier State. It is said the train will be the finest that ever pulled out of Indiana.



NORTON COMPANY BANQUET, STATE MUTUAL RESTAURANT

NORTON COMPANY SALES CONFERENCE

The 1910 Sales Conference of the Norton Company, manufacturers of Norton grinding wheels, was at the Worcester plant Jan. 4 to 7, inclusive. At the close of the conference a dinner was given by the company at the State Mutual Restaurant, at which the traveling men, factory foremen and others identified in selling or manufacturing capacities, were present by invitation. One hundred plates were set, and at the end of the menu the guests were entertained for an hour by Mr. William Lyman Underwood of the Massachusetts Institute of Technology, Boston, Mass., with a talk on "Hunting with Canoe and Camera in the Woods of New Brunswick." His talk was illustrated with lantern pictures that were remarkably realistic of a hunter's experiences.

Another interesting feature of the evening's entertainment was the report of a committee appointed to look thoroughly into the genealogy of many Norton men who were present. The several shields shown on the screen revealed many questionable (?) traits inherited from ancestors.

The Norton Company reports that the sales conference each year becomes more interesting and more valuable both to the company and the men of the road.

M. S. WRIGHT COMPANY

The M. S. Wright Company, 49 Hermon Street, is preparing to move its equipment from the present location to a larger plant at the corner of Jackson and Beacon Streets. The transfer probably will be completed in February.

The need of enlarged quarters has become imperative because of the development of the manufacture and sale of "Pneuvac," a new vacuum cleaner, adapted to both hand and motor motive

power, built by this concern. The company, which originally acquired prestige in the hardware business, has only been handling this cleaner since last July, and during this time the business has developed to such an extent that a more extensive plant is needed.

"Pneuvac" is a new thing in the vacuum cleaner line, and its manufacturers claim that it is superior to anything now on the market.

The original model was made two years ago by M. S. Wright, but it was laid on a shelf and practically forgotten for some time, under the pressure of other business. It was finally taken in hand again, and after being put to every conceivable test, was brought to the stage of perfection that warranted marketing it.

"Pneuvac" is designed not only for the home, but for hotels, theatres, churches and all large buildings. It is manufactured in three styles, one of which is operated by hand, and the other two by motor. The first style is designed for ordinary household purposes, while the other two, of varying sizes, are for more general work.

The mechanical apparatus of the machine is compactly concealed in a five-ply mahogany case, presenting a handsome appearance. A strong, specially-made hose, an inch in diameter, is used for suction purposes. In its operation every particle of dust, from floors, carpets, rugs, clothing, furniture, walls, together with all disease germs, microbes, insects and their eggs, disappear through a nozzle into a receiver, and this without raising any dust whatever.

The receiving bag can be emptied in fifteen seconds and in a manner that precludes a particle of dust reaching the lungs of the operator. The hand machine has an eight-inch vacuum, and the power machines much greater. The vacuum draws in dirt and dust with such certainty that the cleaning process is very thorough.

It is easily operated, either by hand or by the first-class motors with which the more expensive machines are equipped. There is nothing about it to get out of order and a machine will last indefinitely, in ordinary usage, it is claimed.

A very important feature of the machine that its manufacturers claim is unique is an indicator showing the amount of pressure. A higher vacuum than ten inches can be obtained, but it has been found that a vacuum of that amount is not necessary, and in some cases would be injurious. The advantage in being able to regulate the vacuum in cleaning various articles is that some do not require a heavy vacuum, as in the case of the finest rugs, while it is absolutely necessary in other cases. Every machine is so built that the vacuum can be controlled to a range of from two to ten inches. The person working the machine has at instant command whatever vacuum may be desired for any particular line of work.

Another advantage of this machine is that it will hold its vacuum from a half to three-quarters of a minute after the power has ceased. This characteristic results from its rigid construction throughout, not the slightest particle of leakage being possible anywhere, the manufacturers assert.

While the "Pneuvac" is manufactured by the M. S. Wright Company, it is sold through the Pneuvac Cleaner Company, the main offices of which are located in Boston, the distributing point for the country. Many of the devices are in use in Worcester, and in numerous other places throughout the United States, and the manufacture of the machine gives every indication of eventually becoming a very flourishing industry.

STEVENS AUTOMATIC ELEVATOR DOOR AND GATE LOCK

In the spring of 1904, the street-floor door of the passenger elevator in C. F. Stevens' hotel, the Aurora, 656 Main Street, was left unlocked by accident, and a woman guest of the house, not noticing the absence of the elevator, pushed the door open and started to walk into the elevator opening. The timely arrival on the scene of a man, who grabbed the woman, prevented her from falling nineteen feet to the sub-cellar, an accident that surely would have been attended by serious and, in all probability, by fatal consequences.

For some time Mr. Stevens had been greatly annoyed by the failure of persons using the elevator to lock the doors, and the losing or breaking of keys to the doors. The noise made by the slamming of the doors sufficiently hard to insure their locking also had been the cause of considerable complaint from occupants of rooms near the elevator well.

The narrow escape of the woman caused Mr. Stevens to set his wits to work in the hope of hitting upon some scheme for preventing the recurrence of such an unpleasant episode.

After a day of study he evolved the idea of a trip and catch arrangement, the practical result of which was promptly put in operation in the hotel. The model worked so successfully that one of the locks was installed on each floor of the house, and Mr. Stevens' mind has since been free from all thoughts of worry for fear of women or children falling down his elevator well. Complaints from nervous guests because of the slamming of elevator doors have also become memories of the past.

The lock was gotten up by Mr. Stevens solely for his own personal use, and with no thought of its being patented. Patrons of the house and other persons that witnessed its operation, however, were quick to realize its value, and induced the inventor to patent his idea with the end in view of eventually manufacturing it for the general market. A patent was secured without any difficulty and the article was named the Stevens Automatic Elevator Door and Gate Lock.

No real attempt was made to market the lock until last year's exposition, although many had been made and sold as a result of the daily demonstration of its practicability as witnessed by guests at the Aurora. The demand for it has now assumed such proportions that it is being manufactured on a large scale, and a corps of salesmen is constantly on the road demonstrating and installing it.

The lock, as previously stated, is simple in the extreme, consisting merely of a trip, fastened to the front edge of the elevator floor, and a trigger-like lock, fastened in an upright position to the door casing of the elevator well, close up to the rear end of the door, and exactly opposite the location of the trip on the elevator floor or platform. The lock is released or set by the trip in the ascent and descent of the elevator, and can be so adjusted that the door of the elevator well cannot be opened unless the floor of the elevator is on a level with the landing floor. It can also be set so as to permit of any desired amount of stopping space, above or below the landing floor. When the door of the elevator well is closed, the trigger-like lock drops against the inside edge, so securing it that it cannot possibly be opened by a person outside. When the elevator ascends, the tip of the trip, which is bent at just the proper angle, catches the tail-piece of the lock, forcing the lock into a perpendicular position, thereby releasing the door. As the car passes the landing floor the pressure of the trip on the tail-piece of the lock is released and the lock drops into its former position against the edge of the door, bracing it as firmly as though a cleat were screwed against it. The same operation is repeated in the descent of the elevator, the trip extending both above and below the elevator floor.

The lock is made of malleable iron, finished in Japan black, lacquered, or nickel-plated. It is also made in sizes sufficiently strong to resist the action of the heaviest steel doors used in the construction of modern buildings.

In addition to the Aurora, some of the Worcester buildings in which the lock has been installed, are: Hotel Warren, Hotel Parker, Hotel Newton, the Kensington, Rawson and Gibbs, and several other apartment houses; the Hotel Essex, the Massachusetts building and the Houghton Dutton building, in Boston. The Massachusetts Mutual building, in Springfield; the Hotel Belmont, in New York, and the Stearns building, in Hartford, are also equipped with the lock from basement to top-story floors.

Plans for the incorporation of a company under a Massachusetts charter, to manufacture and market the lock, are now under way.

AN ANTISEPTIC SHOE TREE

A brand-new, Worcester-made article soon to make its appearance on the market in connection with the shoe industry is Ware's Health Shoe Tree, the product of the Health Shoe Tree Company, with an office at 86 Foster Street.

The new device is being manufactured by the Standard Manufacturing Company, 186 Union Street, and E. R. Ware is the man in whose mind was conceived this latest idea in shoe trees, and it is therefore his name that is given the invention. Mr. Ware realized that shoe trees have an advantage in being put into shoes that have been exposed through the day or for several hours to the natural moisture of the feet, the dirt and filth of rains, mud, snow, etc.

Impressed by the fact that the inner sole and lining of a shoe absorb the perspiration from the pores of the foot and collect germs from the street, he conceived the idea of an antiseptic shoe-tree that not only would keep the shoe in its proper shape, but would serve to keep the feet healthy when the shoes were donned again.

Devising a tree that is easy of construction, he succeeded in producing one in which the wood is first treated with a disinfecting solution. The foot of the tree is provided with receptacles containing a composition of antiseptic and curative remedies, whose soothing and healing qualities are expected to impregnate the shoe itself.

W. H. LELAND & CO.'S NEW PLANT

It is contended that by the use of this tree the shoe will be made to hold its shape, the germs collected in the wearing will be annihilated and the foot be kept always in a perfectly healthy condition.

PIERCE & RICE OIL COMPANY'S NEW QUARTERS

Another important step in the industrial development of Worcester will be taken with the contemplated removal of the plant of the Pierce & Rice Oil Company from its present location, 554 Park Avenue, to larger quarters at the corner of Canterbury and Hammond Streets, formerly occupied by the Howe Paint & Color Works.

For some time past the increasing business of the Pierce & Rice Company has necessitated the consideration of the project of securing more commodious quarters, and action was hastened by the purchase of its Park Avenue property by the city in connection with the Beaver Brook improvements.

The company came into possession of its present plant through the purchase of the Worcester Oil Works in 1904, and, becoming firmly established in business, it has for some time past been handling with much success the manufacture of mill and laundry soaps, all kinds of lubricating and cylinder oils, and a variety of tallows and greases. Among the products handled by this concern is mill waste.

A larger and more conveniently arranged plant having become absolutely imperative, the management, taking advantage of the sale of its present property to the city, secured the former Howe plant, which will undoubtedly be large enough to meet the demands for many years to come. The new plant will be fitted with the most modern machinery for the manufacture of soap and the refining of oil. David B. Rice is president, and Herbert E. Howe treasurer, of the corporation.

R. E. KIDDER MANUFACTURING SHUTTLES

R. E. Kidder, machinist and patternmaker, 35 Hermon Street, has added a new branch to his business in the manufacture of a shuttle for looms. Although this line is an entirely new departure with him, it already gives indications of becoming an important addition to his business. In response to suggestions from numerous mill men, Mr. Kidder has begun the manufacture of shuttles for use on looms used in the production of narrow fabrics, silk ribbons, etc.

Different mills naturally demand shuttles of different designs and Mr. Kidder is personally interesting himself in the construction of machinery with which to meet this demand. He already has turned out some fine specimens of shuttles from apple and other hard woods, that bear the stamp of skill and perfection, and indicate that he is capable of accomplishing the task he has undertaken.

In this connection Mr. Kidder also contemplates the manufacture of general loom supplies, such as blocks, lathes, etc. In addition to his regular machine and pattern business, he is engaged in the building of saw benches, and only recently shipped an order to a large firm in San Antonio, Tex. He manufactures an extensive line of envelope machinery and die presses for cutting envelopes, and does a general business in machine jobbing, automobile repairing, etc.

STOCKBRIDGE MACHINE COMPANY IMPROVEMENTS

An enlargement of the plant of the Stockbridge Machine Company at 3 Maud Street, now in progress, evidences the advancement that is being made by that industry. The new building will be of frame construction, 40 by 42 feet, and two stories high. A new engine will be installed in the power plant upon the completion of the new building and the concern's producing capacity practically doubled. It is the present intention of the management eventually to extend its building operations until the lot it now occupies is completely covered.

W. H LELAND & COMPANY

This company operates three distinct departments, namely, the crankshaft department, where it does machining, by grinding methods, of automobile, marine and stationary engine crankshafts. This department is operated night and day by two distinct shifts of men. The present output is from eight hundred to one thousand four and six throw crankshafts a week, which does not include a large number of single and two-throw shafts. The list of customers for whom the company makes crankshafts is in itself a representative list of the automobile and marine engine builders in the country.

The second department is the machinery department, which department builds a high grade of machine tools, the principal being grinding machines and high speed sensitive drills, both machines being of high grade workmanship and latest design. The demand for both of these lines is much in excess of the present capacity, and the equipment of another large factory is nearly completed for the better handling of this department.

The third department is the ignition department, where the "Worcester" ignition specialties are manufactured, including various types of automobile and marine spark coils, switches, and work of a similar character. The same high reputation and high grade of workmanship maintained in the ignition department are existing in the other departments of the plant.

To handle the work of these three departments better, the number of employees has been increased 75 per cent. during the past year, the amount of shipments has increased 125 per cent. and 130 per cent. floor space has been added.

A picture of the plant of this concern as it stands to-day accompanies this article.

J. T. BRIERLY, Pres. R. K. HYDE, Treas.

THE BRIERLY-LOMBARD CO.

SUCCESSORS TO

CRAWFORD & CO.
(FORMERLY SUMNER PRATT & CO.)

Steel Pulleys,
Belting,
Hangers.

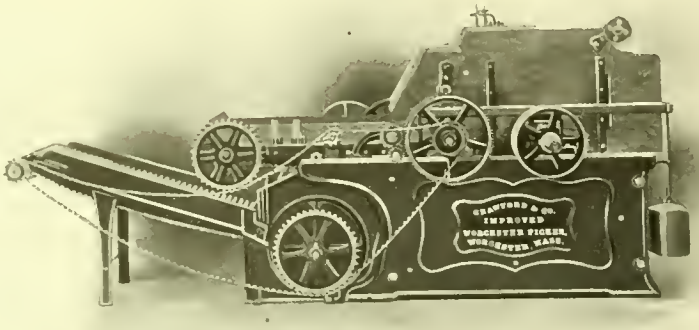
Power Transmission.

New and Second-hand Woolen Machinery.

Everything in Mill Supplies.

ESTABLISHED 1847

663-665
MAIN STREET



THE IMPROVED WORCESTER SHODDY PICKER

WORCESTER, MASS.

LOMBARD MACHINE CO.
MANUFACTURERS OF

Preparatory
Machinery

For Woolen Mills, including

PICKERS,
CARDS (WOOLEN AND WORSTED),
CARD BREASTS,
CARD FEEDS,

ALSO THE

LOMBARD-LANDRY
HIGH-SPEED LOOM

For Woolens and Worsteds.

ESTABLISHED 1823

CORNER STAFFORD AND
HEARD STREETS

Made in Worcester.

Worcester's Ideal Clothing Store, Hammond Clothing Co., Main and Chatham Streets

[Xa]

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

THE MECHANICS' EXPOSITION OF 1910 IN THIS NUMBER

The WORCESTER MAGAZINE Illustrated

THE NEW TATNUCK SCHOOL

MARCH, 1910

$1.50 per year

Published by the Worcester Board of Trade

WORCESTER, MASS., U. S. A.

15 cents the copy

Central Supply Company

A visit to our warerooms will repay any intending purchaser

Telephone 4440

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

Foster, Commercial and Mercantile Streets Worcester, Mass.

THE WYMAN & GORDON CO.
DROP FORGED
CRANK SHAFTS

USED IN
FAMOUS CARS
THE WORLD OVER

RELIABLE
STRONG AND TOUGH

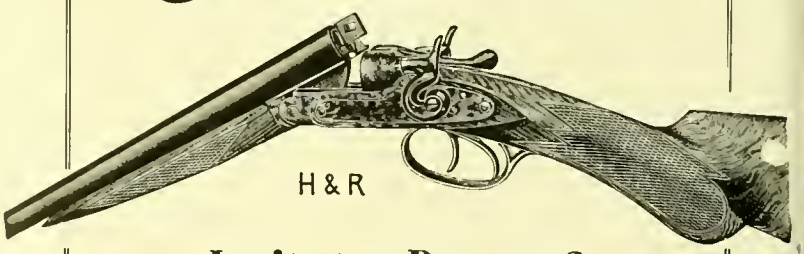
SHOPS
WORCESTER, MASS.
CLEVELAND, OHIO.
WRITE FOR ESTIMATES

TRADE
H&R ARMS CO. MARK

Established 1871

Incorporated 1888

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5½ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

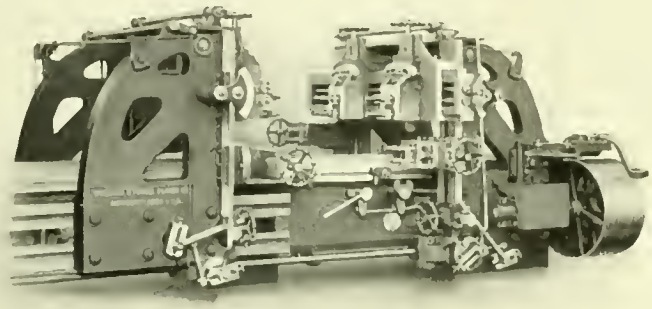
VOL. XIII. MARCH, 1910 No. 3

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

THE MELTING POT.
Public School Conditions in the Heart of the Commonwealth in Comparison with those Elsewhere—By Prof. U. Waldo Cutler, 57-60
WHERE THE DOOR OF KANSAS SWINGS OPEN—By Carl Dehoney, secretary Kansas City, Kan., Mercantile Club, 61-62
THE NATIONAL MUNICIPAL LEAGUE—By Clinton Rogers Woodruff, secretary, 63-64
GEMS FROM BURNS, 64
THE NEW TATNUCK SCHOOL—By Edwin B. Maynard, 65
STATE MUTUAL LIFE ASSURANCE COMPANY OFFICERS, 66
MARCH MEETINGS, 67
EDITORIAL REFLECTIONS, 68-69
An Object Lesson.
A White Mountain Forest Reserve.
Worcester in the Limelight.
DEPARTMENTS, 70
Local February Conditions.
Worcester Patents.
Thoughts on Business.
CURRENT EVENTS, 70-71
BOARD OF TRADE COMMENT, 72-74
INDUSTRIAL WORCESTER, 75-92

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

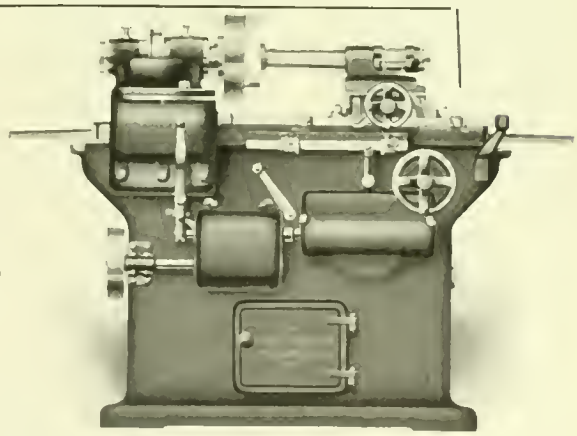
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents, Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China, Henshaw, Buckley & Co., San Francisco and Los Angeles, Cal., Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain, Herman Haelbig, Dresden-A. 3, Germany and Austria

WE MANUFACTURE

GRINDERS



CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,

ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Coates Flexible Shaft

Will stand all kinds of abuse. Can be twisted and turned in any way without interfering with the tool or business end.

Place the motor on the floor, take your two pound breast drill and "DRILL." On account of its portability and great utility in inaccessible places and tight corners, the Coates Outfit turns many puzzling time-consuming jobs into simple propositions.

Learn More About It

Send for book W

COATES CLIPPER MFG. CO.
Worcester, Mass.

HOWARD - WESSON - COMPANY
INCORPORATED
ARTISTS AND ENGRAVERS
DESIGNERS OF ADVERTISING
CATALOGUE MAKERS

WORCESTER MASSACHUSETTS

Gentlemen:-

The Howard-Wesson-Company has purchased of Woodbury & Company the Art Department and the business of making half tones, duotones, three and four color plates, line and wood engravings.

Messrs. Howard and Wesson have long been identified as officers and managers of the latter Corporation, and with the same efficient staff of artists and engravers are well prepared to design, illustrate and engrave for high class advertising.

They thank you for the favors so generously accorded in the part and trust that future dealings may be even more pleasant.

Yours very truly,

Howard-Wesson-Company
A. E. Howard Pres.

The same location - #4 Walnut Street.
The same telephones - #2670-2671

ALL HARDWARE STORES

TRADE MARK
A MARK OF QUALITY
THE BEST IN
WIRE HARDWARE

ALL DEPARTMENT STORES

If you want the best, please specify our brand

The Wire Goods Company
28 Union Street
Worcester, Massachusetts

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

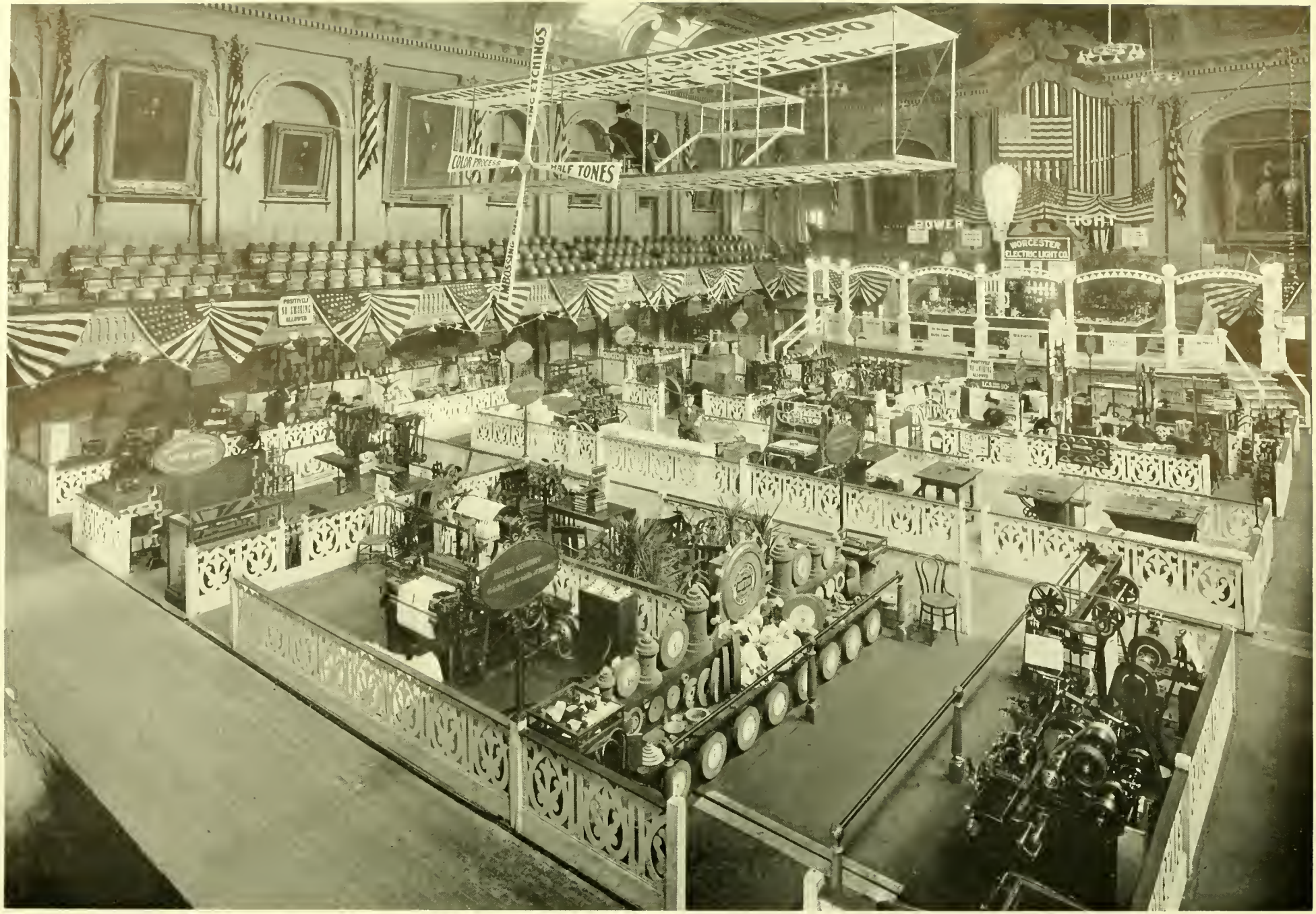
Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



MECHANICS HALL DURING EXPOSITION, 1910.

The WORCESTER MAGAZINE

The Melting Pot

Public School Conditions in the Heart of the Commonwealth in Comparison with those Elsewhere in the United States

By Prof. U. Waldo Cutler

IN a progressive modern community the school system is a department of public service second to none in importance as a business undertaking, in complexity, or in possibilities for good or ill. Throughout the country, if not indeed throughout Christendom, the schools are the centre of cordial and general public interest and co-operation. Our civic consciousness expresses itself more fully through this channel than through any other. Our schools are capable of being the most complete embodiment of our social ideals, and as such we should prize them and study to have them in keeping with our best public spirit. Other forms of expression of the common ideal for society are important, but the schools are unique in that they unite the deepest interests of all sorts and conditions among us.

U. Waldo Cutler

If the schools are our chief concern, we, as citizens, wish to know how to attain the best they are capable of yielding. Realizing the importance of a wide intelligence upon school affairs at home and elsewhere, the Public Education Association of Worcester has recently been making some studies of school conditions the results of which may be of interest to others in the city, as they have already proved to be among its own members. Data have been gathered from the latest reports of a considerable number of representative cities of the United States, and by means of the accompanying chart we shall be able to compare ourselves with sister communities, near or remote—a comparison by no means discreditable to our home institutions in many if not in all respects. But, discreditable or not, we as citizens ought not to close our eyes to the great movements of our time, for the city or town that ignores the experience of other communities in organizing and conducting its public affairs neglects one of the most important means for civic betterment at home.

In entering upon these studies the purpose of the Association was wholly constructive, and in bringing some of the results to the attention of readers of the Worcester Magazine we are indulging in no spirit of criticism whatever. There are certain tendencies in public opinion with reference to public school matters that all of us as citizens should know about, but any destructive criticism of our time-honored institutions is far enough from our purpose. With all progressive sections of the country we doubtless share what Dr. Snedden has called a certain restlessness, born of aspiration toward the best social life possible, which is ultimately the Kingdom of God on earth, but such an aspiration toward the best conditions does not imply lack of appreciation of what is worthy in our present conditions; and what may prove, upon investigation, to be unworthy we ought to be frank enough to acknowledge, and try to correct.

So we Seek the Co-operation

of all thoughtful people as we observe how some communities are trying to bring forward a better social order through modern methods in public school administration. Older methods have accomplished much, and can not fail to accomplish results still. Perhaps they are all we think we need, but the best we can attain is none too good for us, and toward this ever-advancing standard of greatest efficiency we are certainly ready to strive, as we recognize opportunity for improvement. If we have already attained to the highest possible degree of ef-

ficiency in our school system, the fact can become only more apparent through our study, and our complacency need not be in the least disturbed as we consider the innovations elsewhere.

As evidence of the fact that the schools of Worcester are recognized as of prime importance, let us first consider some details of the last city reports. In the year 1908 the schools received 30.5% of the total tax levy; street maintenance, 17.4%; the Fire Department, 10.8%; the Police Department, 8.4%; street lighting, 5.6%, and the various other departments of public work smaller proportions. $5.24 on every thousand dollars of property valuation went for the support of public education, nearly twice as much as for any other public interest. This appropriation means for Worcester an average annual tax for schools alone of $5.09 from every inhabitant. The commissioner's report for 1906 gives the average per capita tax for schools throughout the United States as $3.67. Evidently Worcester intends to provide at least reasonably for school maintenance.

Also, from the point of view of school population we must recognize the school problem as no insignificant one. The teaching force alone is more than one-half of 1% of the total population; 4494 boys and girls are registered in private or parochial schools, a number which is over 19% of the total public school registration of 23,268. The school population is 16.2% of the estimated total number of inhabitants, as many people as there were in the whole city two generations back. The proportion between school enrollment and total population does not seem to vary widely among our cities, but 16.2% is a larger per cent. of the whole population than is represented in the schools of any other city, the statistics of which are available for these studies. In Providence the proportion is 15.11%; in Grand Rapids, 15.09%; in Milwaukee, 14.98%; in Los Angeles, 14.7%; in Fall River, 14.2%, etc. This unusually large representation in Worcester still further emphasizes the necessity of alertness in adapting ourselves constantly to the ever-changing conditions.

The Growing Complexity of Races

represented in the schools still further shows the magnitude of the problem of school population. During the last five years the total school population of Worcester has increased by 596, the number of children of native-born parents having declined by 112, and that of foreign-born parents having increased by 708. Two years ago the Swedish children outnumbered the Irish, and according to the last report the Russians exceed the Canadians by nearly 400. At the present rate of increase they will, in twelve years, outnumber the Irish. These facts serve to illustrate the complexity of our educational interests. With forty or fifty different nationalities represented in her population, Worcester shows fairly well the conditions prevalent throughout the United States. Worcester is probably an average city as to diversity of nationality in its school population.

But the particular problem that demands our attention in special manner is more fundamental than school finance or school population. If the public schools are our largest business undertaking, if the complications of school population are specially perplexing, then there is all the more need for highest possible efficiency in the organization of this enterprise. In this connection the accompanying chart is of special significance, showing as it does a comparative study of conditions of school administration in twenty-six representative cities from which information has been gathered. The names are arranged in the order of population, according to the census of 1900, an order that will be greatly modified by the new census, as is suggested by the column of school enrollment, which, as we have just seen, bears a somewhat uniform proportion to the total population. By means of the facts presented on the chart certain tendencies in school organization can be easily recognized.

One very interesting tendency brought out in several groups of details is that toward larger independence and dignity of the school board. The very name given to the school-governing body by most cities is in itself suggestive. "Board of Education," "Board of School Directors," "Board of School Commissioners"—such titles imply a right to plan and execute, independently of political machine, party dictation, or local and religious prejudice. Any wisely selected school-governing body should be so broad in sympathies, so judicial in disposition, so liberal in culture, so generous in patriotism, that such an independent position can with perfect safety be granted its members.

The Great Interests

involved in training the citizens of to-morrow ought not to be restricted to any mere *committee* of the City Council, for a city council has neither the leisure nor the experience for the wise exercise of authority over the educational system. Of course, no one will for a moment assert that, in the four or five New England cities still retaining the old name school committee, the position of the board is necessarily entirely one of subordination. It is everywhere recognized as a body of marked rank and importance, numbering on its lists many high-minded, patriotic citizens. This fact, however, must be recognized, that the tendency is unmistakable in the country as a whole toward placing the school board on its own unrestricted responsibility to an extent that some of the older communities have thus far refused to allow. In Worcester, for instance, control of the school buildings is in the hands, not of the school board, as would seem fitting, but of an appointee of the Common Council, by which body till two or three years ago even school janitors were hired, and to which they were responsible. The school revenue, also, is merely an appropriation voted each year by that same City Council. In Buffalo, strangely enough, even the formality of a school board is dispensed with, and the common council controls the schools directly by a committee of its own appointing, checked to some extent by a superintendent elected by the city at large. With this one exception, however, no city seems, in this matter of independent responsibility on the part of its school board, to have advanced so little way toward the generally accepted principle as has Worcester.

As appears from the school reports, very many school boards throughout the country are granted their own independent revenue, obtained by a special tax rate prescribed by law. There are marked advantages in making the school revenue a fixed amount that can be counted upon from year to year. Under such a plan the educational system is placed on a definite footing, independent of annual and possibly variable appropriations by a changing city government,—though it can not be doubted that Worcester's City Council has thus far provided for public education with a fair degree of liberality. The average of $29.12 per pupil, shown in the last column of the chart, as computed from data in the last printed report,

compares favorably with the averages in other cities. The average of all the averages in this column is $28.64, showing Worcester to be the eighth in the list of twenty-one cities the statistics of which were available for this computation. In many cities included in the list, invested funds derived from sale of public land grants or state and county appropriations provide largely for public school maintenance. Worcester, on the contrary, is almost wholly dependent on the appropriation from the local tax for the more than two-thirds of a million dollars annually spent in preparing the coming generation for citizenship.

while Worcester clings to the ward idea, uncorrupted by modernism. Did not the public school originate in New England? and does not the Heart of the Commonwealth of Massachusetts know how best to interpret the democratic principle as applied to educational matters, without seeking counsel abroad? As a town Worcester had its local school committee, elected by the community at large, and she prospered. With the addition of each new ward, *politics* has repeatedly forbidden merging into the general welfare the sectional opportunity for local prestige. Consequently the size of the school committee must grow with the number of city wards. With

Names of Cities.	School enrollment.	Name of body governing school system.	No. members.	How chosen.	Term.	Ward or at large.	Av. cost per pupil.
St. Louis	86877	Board of Education	12	Pop. vote	6 yrs.	At large	$23.24
Boston	108531	School Committee	5	do.	3 yrs.	do.	$32.74
Baltimore	68926	Bd. of Sch. Commsrs.	9	Aptd. mayor	6 yrs.	do.	$24.51
Cleveland		Board of Education	7	Pop. vote	2 yrs.	do.	
San Francisco		do.	5	Aptd. mayor	6 yrs.	do.	
Detroit	52231	do.	20	Pop. vote	4 yrs.	18 wards	$29.09
Milwaukee	47870	Bd. of Sch. Directors	12	do.	6 yrs.	At large	$26.12
Washington	52739	Board of Education	9	Aptd. Con. com	3 yrs.	do.	$30.69
Louisville	32035	School Board	16	Pop. vote	2 yrs.	8 dists.	$21.01
Minneapolis	45335	Board of Education	7	do.	6 yrs.	At large	$28.50
Providence	32193	School Committee	33	do.	3 yrs.	10 wards	$26.85
Indianapolis		Board of Sch. Comsrs.	5	Pop. vote	4 yrs.	At large	
Kansas City	33198	Board of Education	6	do.	6 yrs.	do.	$39.52
St. Paul	27800	Board of Sch. Inspctrs	7	Aptd. mayor	3 yrs.	do.	$26.49
Rochester		Board of Education	5	Pop. vote	6 yrs.	do.	
Denver	36798	do.	5	do.	5 yrs.	do.	$27.03
Toledo		do.	5	do.	5 yrs.	do.	
*Worcester	23268	School Committee	30	do.	3 yrs.	10 wards	$29.12
Syracuse	22558	Board of Education	7	do.	4 yrs.	At large	$29.57
New Haven	22048	do.	7	Aptd. mayor	4 yrs.	do.	$23.41
Fall River	16280	School Committee	9	Pop. vote	3 yrs.	do.	$25.24
Omaha	18302	Board of Education	15	do.	3 yrs.	do.	$32.58
Grand Rapids	15970	do.	9	do.	3 yrs.	do.	$31.61
Los Angeles	44520	do.	7	do.	2 yrs.	do.	$37.37
Albany	12464	do.	3	Aptd. mayor	6 yrs.	do.	$28.00
Springfield	14451	School Board	10	do.	3 yrs.	8 wards	$28.75

CHART OF SCHOOL SYSTEMS.

But the Chart Deals Chiefly

with the election and organization of the school-governing body, and as such forms the most important part of these studies. The marked tendency toward small school boards is unmistakable. Of the representative cities considered, only Providence has a larger board than Worcester, and only three have over 16 members. Nineteen have 10 or fewer; the average size of the board is 10, but leaving out Providence and Worcester the average is 8.4. The argument in favor of small boards has been often presented, and hardly needs reviewing. The main purpose of this study is to recognize the widely prevalent fact that almost everywhere cities are introducing small school boards, and are invariably finding them in every respect more efficient than the outgrown product of ward politics. Meanfifty wards of course there will have to be a board of one hundred and fifty members, for, consistency being a jewel and we being a democracy, each ward must evidently be given its fair share of the *advantage* to be derived from holding public office, else what is the use in being a democracy at all!

A second tendency, shown in column 5, seems to be that toward electoral rather than appointive boards, though several very progressive cities provide for the appointing of the school-governing body, usually by the mayor. In New Orleans the appointing power lies with the State Board of Education; in Washington, with the district judges. In Worcester we have, doubtless wisely, always elected our school committee.

From the seventh column of the chart is conclusively shown the popular demand, outside of New England,

that school interests be absolutely removed from political greed and strife. More and more cities and towns are insisting that the *best* men shall be selected and elected *from the whole community*, rather than the men most eager for public office, perhaps self-nominated, regardless of any qualification except "availability" within the limits of a given ward. In a large majority of the cities represented in the list, the members are now chosen from the community at large. Only three, including Worcester, cling absolutely to the ward idea. Springfield can not yet rise fully to the plane of the majority, but elects one of her school committee at large, the other nine by wards. Providence has a similar plan. Worcester in this particular has not even begun the ascent to a higher conception of public welfare, but insists still upon strictly local representation. In some places the popular decision as to the best man for this office is expressed through a special school election, held quite apart from the general election of other officials, where, perhaps, political intrigue for selfish ends must figure for a while longer.

In writing of just these principles of school administration we are now considering, Dr. A. S. Draper said, ten years or more ago, "There is not a city of any importance in the country in which they are not under discussion, and there are few in which some of them have not been adopted and put in operation." Not one of these principles which "must necessarily be observed in framing a plan of organization and government in a large city school system" has even yet been adopted in Worcester, and still we rather pride ourselves on being fairly progressive.

A Pamphlet Issued Some Years Ago

in connection with the movement in Milwaukee for a more up-to-date school system is made up of testimony to the same end. "Keep the schools of Milwaukee out of ward politics," "Schools belong to the city, not to the wards," "Elect school board members from the city at large,"—these statements of principle, together with three or four sentences from Commissioner Brown to the same effect, make up the title page of this stimulating document.

Still another very important tendency, not presentable in tabular form, is that toward making the school board a strictly legislative body, and toward delegating to specialists the executive work of the school department,—a superintendent of school buildings or a business manager, a superintendent of instruction, and perhaps others. This tendency results in placing greater responsibility upon those salaried officers, with the consequence that more and better work is accomplished.

A lengthened term of office for the school Board also tends to place the system of public instruction on more stable footing, and to give it the dignity its importance warrants. A reasonable degree of permanence in any office is conducive to intelligent and interested work on the part of the office-holder. As appears in the sixth column of the chart, fourteen out of the twenty-six cities have a term of four years or over. Ten have a term of five or six years. The average term is over four. Here again, therefore, Worcester seems to be holding her department of education somewhat back from the unrestricted opportunity and confidence assigned it by a large and growing majority of our leading municipalities. If we are jealous on account of the large privilege of public usefulness our school board may have, and for that cause deny it its reasonable responsibilities, it will be well to conquer that selfishness at once. If we are so prejudiced and arbitrary that we can trust the broad interests of education only to the control of our own special religious creed, then we must give up our modern conception of liberty, and, in spirit, live in some earlier century. If we are so doubtful of the integrity of school boards in general that we fear to place upon them the full and just responsibilities of their position, the sooner we find out their weakness or wickedness the better for society, so that we may wisely hasten to train up a new generation of patriots, strong enough faithfully and honorably to discharge their high duties to the public, when called conspicuously into her service.

In Discussing these New School Charters

and laws here considered, a very recent writer says: "The ends sought are such as the banker, the manufacturer or the merchant aims for in the conduct of his business. The same reasons which make one business enterprise successful and make its promoter the object of admiration, not to say envy, apply in the management of a school system. If the organization is simple and flexible, and every officer can perform his duties with no other purpose in mind than to be honest and efficient, a school system at once rises in the respect and confidence of the community, and there is increased opportunity for the growth of self-respecting professional ability. * * * *" "Nothing is more promising for the future of public education in the United States than the salutary lessons which are to be learned from those cities which have carried into school management the principles of municipal government and business reform."

In some particulars, then, it appears that Worcester is falling back toward the rear of progress in educational matters, if not in the financial support of her schools. It is easy for any community, unless the citizens are alert and very patriotic, to yield to inertia, sometimes, before a complex problem; in the pressure of rapid growth, to forget to guard against the unworthy ambition of politicians and selfish office-seekers; under the stress of wealth-gaining, to fail to regard quite seriously enough the preëminent importance of right principle as the foundation of an efficient institution. Most cities are doubtless alike in feeling some just pride in what the public schools have already accomplished, and in honoring the many noble workers for them and in them today. The past, at least, we will consider secure. The present we may prefer to idealize, finding comfort in what we aspired to be and were not. But the future of our educational system will be vastly richer if we of the present watch the signs of the times, and welcome any suggestions of improvement that may come to us through the perhaps dearly bought experience of sister cities, that have successfully struggled with the complex educational problems of our time. Energy expended in merely party contentions is worse than wasted. Office gained for selfish ends can be of little or no public service. A cause so vital to our welfare as are the schools should be entrusted only to people broad-minded enough to consider the interests of the whole community, and we as electors should see to it that such a school board is given every opportunity that experience and skill can devise for realizing its high purpose.

Where the Door of Kansas Swings Open

The Kansas City that is not in Missouri, but in Kansas, and How it is Being Builded out of the Shadow of its Elder Brother into the Substance of its Own Thriving, Vigorous, Progressive Personality

By Carl Dehoney, Secretary Kansas City, Kan., Mercantile Club

IN the wonderful development of our common country there is nothing more interesting than the working of the mysterious influence which moves other sluggish towns to become cities with metropolitan characteristics and ambitions. This period of change is everywhere at work in Kansas City, Kansas. Its first beginnings were some ten years ago, but it has been moving with much more rapidity since 1906, when the city abolished its liquor traffic and cleaned up its political atmosphere. For fifteen years prior to last spring, but one mayoralty candidate had run upon a written platform. The people had been compelled to be satisfied with verbal promises made in the heat of political campaigns and forgotten the day after election. However, in 1909 a mayor was elected upon a platform which, among other things, said:

"We are proud of the fact that Kansas City, Kansas, is the largest city in America without a saloon, gambling resort, or disorderly house, and that its citizens are imbued with a desire for moral, economic and municipal progress and reform. We pledge the party and its candidates not to accept directly or indirectly any campaign contribution from brewery or liquor interests, gambling or pool-room interests, street railways, electric light, gas, railroad or other public utility corporations. We favor civil service in the police department. We condemn the employment of useless officers in any department. We believe in the strict regulation of all public utility corporations. We are opposed to the renewal of contracts for lighting the city with either gas or electricity for a longer period than five years, and to the granting of an electric light franchise for a longer period than ten years. We are in favor of the enactment of laws providing for the granting of any street railway, gas, electric light, telephone, or other utility franchise, only after the ordinance providing for the same has been submitted to and approved by a vote of the people at an election called for the purpose."

Since that time the city has voted to abolish its ward system altogether, and to adopt the commission plan, under a law which provides for the election of a board of five commissioners at large by the city, and the fixing of responsibility upon these commissioners; requiring them to give all their time to the work of their respective departments; and providing for the initiative and referendum, the recall, civil service, non-partisan primaries and elections, and for a referendum of franchises upon a ten per cent. petition. The breaking down of ward lines and the doing away with party tickets and party primaries are great steps in advance. The first election under the new law will be held in April.

In the last three years 2464 buildings have been erected in the city, exclusive of hundreds erected in the new territory, just annexed, within the same period of time, not enumerated by the city building inspector. Last year operations were remarkable for the number of substantial homes and building houses of good construction. The growth of the retail business in the city has called for the erection of good business houses in all parts of the city.

An appreciation of the new spirit that is building the largest city in the State was voiced at a dinner of the Mercantile Club, a year ago last fall, by Prof. F. W. Blackmar, professor of sociology of the Kansas University:

"I have been studying this city for a long time," he said. "The task of your city builders has been a difficult one. You began with a scattered community, or rather three separate communities, very loosely bound together. The consolidation made here a city united only in name. Your people were torn by sectional differences, by political differences, by religious differences and by the application of different moral standards. But I have been glad to observe recently that you have about overcome many of these obstacles and that you are laying aside your differences to pull together for the common good. There is a new feeling of harmony in evidence here. I believe you are going to build a great city."

Everything in Kansas has been growing by leaps and bounds within recent years, and not the least of the development of the Sunflower State has been the growth of its cities. The East has long known of Kansas City, Missouri, with its ever-growing trade, live civic spirit and beautiful park and boulevard system, a city built largely by Kansas money, but it is only recently that out of the shadow of the larger city there has come the recognition of its sister city across the State line. For the city in Kansas is coming to be a big one all by itself and the story of its progress within the last decade, especially in the last three years, as briefly outlined in a little pamphlet just issued by the Mercantile Club, the commercial organization of the city, is a very interesting one. From 1906 to the present time, the following things have been accomplished in this city:

In 1906—Liquor traffic abolished.

In 1907—Park and boulevard law procured from legislature, under which expenditure of $150,000 is now annually authorized.

In 1908—Waterworks condemnation act procured.

In 1906-1909—$450,000 spent for new school buildings and additions.

In 1909—One mile of boulevard completed. Two miles graded. Playgrounds condemned. One and one-half millions in bonds issued, to purchase waterworks and make improvements to give city adequate water supply. Ward system of municipal government abolished. Commission plan adopted. Argentine, a city of 8000, consolidated. Limits also extended to include six and one-half square miles of new territory. Vote $290,000 in bonds for new city hall, workhouse and fire stations. Preliminary work done, on million dollar plan, for Kaw River improvement. Population increased from 77,912 to 110,000.

A few years ago Kansas City, Kansas, was a straggling, ugly town. Huron Place, in the heart of the city, was a neglected square used largely as a dumping ground for refuse and tin cans. The chief corner, Sixth Street and Minnesota Avenue, was the site of a wooden bridge, over an open tunnel for a street car line. The city was covered with a series of holes, dangerous be-

cause of the open ponds they made, and very damaging to the appearance of particular communities. How to get rid of these holes was a question frequently agitated. A few women went to work. One of them procured the passage of an ordinance providing for a tax on dogs and had herself appointed as dog enumerator and tax collector, turning the money over to the city for the establishment of a library, which was opened in crowded rented quarters.

Following this came the organization of the Mercantile Club in the fall of 1899, and the beginning of organization effort on the part of a few of the more progressive business men for permanent improvements. A committee from this club induced Andrew Carnegie to build a seventy-five thousand dollar library in Huron Place. The women who started the library movement had the pleasure of seeing the public square redeemed and a move for better things inaugurated.

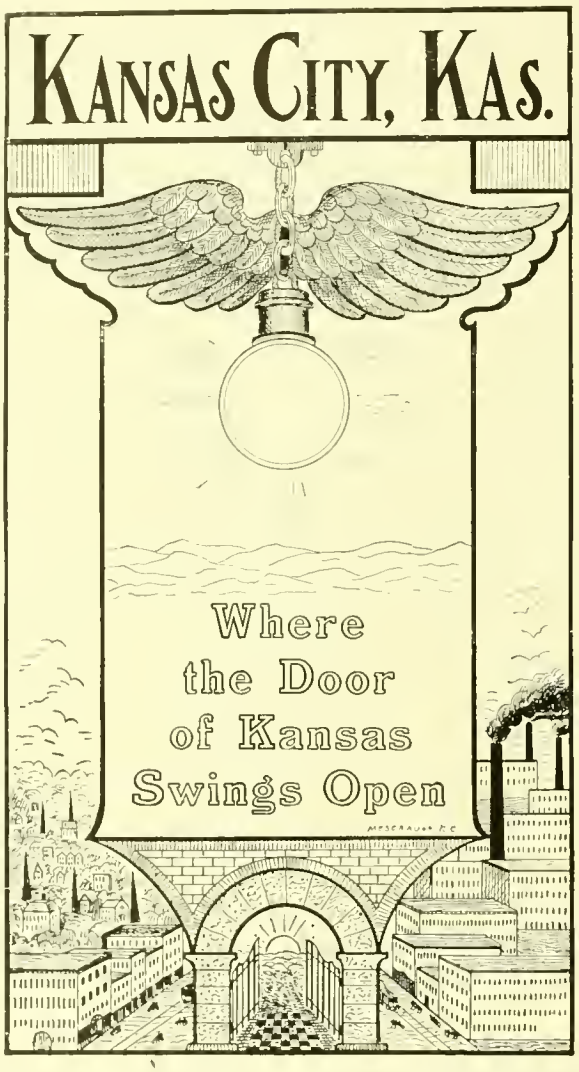
The new club took up the question of a high school and procured the submission of a $75,000 bond proposition at a special election. The members of the local "Hammer and Padlock Club," always in existence in a community just beginning to have ambitions, worked hard and defeated the bonds. On a second trial the bonds carried, but were defeated in court by a technicality. But the friends of a better city were not discouraged, tried again, and succeeded.

This was ten years ago when the city had no school system worthy of the name. Since that time it has built a splendid school system, which is worth in the neighborhood of one million dollars. Within the last three years $450,000 in bonds has been voted, with scarcely a protest, for new schools and additions. The original high school building has been trebled in size and the city now has two other modern high schools, one being for negro pupils; 35 ward schools, 344 teachers and nearly 15,000 school children enrolled.

As a result, largely of the untiring efforts of one man, backed by the Mercantile Club, and over the protests of the still active "Hammer and Padlock" brethren, the city procured the enactment by the Legislature, in 1907, of a park and boulevard law. After a fight in the courts the law was declared valid, and George E. Kessler, who had won national distinction as a result of his park planning in Kansas City, Missouri, was employed as landscape engineer. Mr. Kessler met with the Kansas City, Kansas, park board, and tramped with the members over the city.

"What about these ponds?" was one of the first questions he asked. Upon investigation he found that nearly all of the ponds were fed by living springs. Then the park builder became enthusiastic.

"Don't you know that in these holes you have been trying to fill up, you have one of the features which will make Kansas City, Kansas, one of the prettiest cities in the United States?" he said. "Properly parked and improved, these 'holes' will make a chain of beautiful lakes. Most cities have to be content with artificial lakes in their park systems, but you will have a chance to utilize natural advantages."



Work to carry out a broad plan of parks, boulevards and playgrounds was begun a year ago. Now the city has one mile of completed boulevard, with two miles being graded, and has a park acreage of about 180 acres, with two or three of the old holes condemned, and with plans that will make these holes beautiful spots in the park system. There is to be a big playground in the principal factory district, with smaller playgrounds elsewhere in the city. There will be broad boulevards, and later on river drives, miles in length, skirting wooded hills and commanding splendid suburban scenery. In connection with the parks and boulevards of Kansas City, Missouri, with which it will be linked, it will be one of the finest park systems in the world.

Three years ago a steel viaduct costing two and one-half million dollars was opened, linking the two Kansas Citys together. The railroads have spent immense sums of money for new terminals and in other ways.

After a tedious struggle of five years' duration, the people, in 1909, won out in an effort to own and control their own waterworks system. On May 4, one and one-half million dollars in bonds was voted to purhase the old waterworks plant, which had long been outgrown, and to make extensive improvements. On March 10, another half million dollars is to be voted.

One of the earliest activities of the Mercantile Club was the procuring of an appropriation by Congress for a federal building. The present building erected less than ten years ago is now outgrown, and Congress has voted $150,000 for an addition to be made this spring. The headquarters of the Kansas Federal Court, formerly located in Topeka, have been removed to Kansas City, Kansas.

"Where the door of Kansas swings open" is the latest addition to the family of city slogans. It is interesting to the people of the East, since the East is interested in everything that comes from Kansas.

The National Municipal League

Its Work in Creating Public Sentiment for Improved Conditions in Our Civic Life Has Been Invaluable. Mayor Logan an Esteemed Member

By Clinton Rogers Woodruff, Secretary

THE National Municipal League seems to be in a position to get results. Composed of a network of city clubs, voters' leagues, municipal officers and civic reform associations of various types, it is a keenly intelligent forum for the discussion and settlement of municipal problems and an energetic propaganda of the doctrine that good government is something more than a biennial fit of zeal to 'turn the rascals out.' Its proposed 'model city charter' has bobbed up in every charter convention from Bangor, Maine, to Los Angeles, and from Oregon to Porto Rico—one of the most useful and suggestive pieces of reform work accomplished in recent years."

This is the deliberately expressed opinion of the Evening Post, a leading paper of Chicago, which believes that the League must get credit—pretty largely, at any rate—for the extensive movement now sweeping the country for uniform municipal accounting. "It is at work on a scheme for city budgets which will provide uniformity, simplicity and a certain amount of transparence. It has pressed steadily for the introduction of the study of municipal affairs in college curricula. It has been a steady support to struggling good government bands in various cities, furnishing expert information and a fine assortment of big sticks for the confusion of the civic Apaches."

Clinton Rogers Woodruff

It is perhaps best to let others tell the story of the League's work, or rather how that work impresses the outsider. So instead of writing my own impressions I will avail myself of what others have said, as this on the one hand will savor less of a natural predisposition to give credit, and yet, on the other hand, will go further in according praise and due consideration. So first of all, I will quote freely from an editorial in the Citizens' Bulletin of Cincinnati, where the last annual meeting was held, paraphrasing when necessary.

When reviewing in all its details the success that marked the sessions of the joint meeting in that city of the National Municipal League and the American Civic Association in November, one "is tempted to deal largely in superlatives. Probably nothing but superlatives can properly describe what was the most successful meeting that these two great organizations have ever held." It was gratifying to note the keen interest that Cincinnati took in everything connected with the event. The attendance on the various sessions was large and attentive, showing unmistakably that among our people there is a powerful sentiment that inclines them to study with absorbing interest those problems that are interwoven with everything that enters into urban life.

The meeting called together from all parts of the country a body of men whose superiors in intellect and wide range of learning will be hard to find. If any men understand the municipal problem, and what a great problem it is, they do. What they said had a double value because they only spoke of the things that, as a result of years of study and patient research, they had thoroughly mastered in every detail. Without exaggeration it can be said that an attendance on the sessions was a liberal education. The influence of this meeting upon Cincinnati can not be otherwise than beneficial. It has already taught some people that reformers are not all cranks; a belief that they were had been studiously and industriously cultivated by a certain class of individuals who, for their own profit, desire that the old ways of governing municipalities shall remain undisturbed.

In the hospitality it extended to its guests Cincinnati outdid itself. There was a warmth about it that betokened a feeling that is akin to those impulses that have their origin in "a generous friendship that no cold medium knows."

In the wide sweep of progressive movements, more particularly in municipalities of the first and second class, it would be a difficult matter to determine the extent of the influence exerted by the National Municipal League.

One of the best results in the League's work is the outcome of individual effort, and, in this connection, the membership of the League is a good index to civic progress. For instance, the growth in the League's membership from 892 in 1905 to 1149 in 1906, and from 1149 in 1906 to 1600 last year, means more than can be expressed numerically.

In a letter from an active good government worker in a Kansas town, a further idea is given of work being done. This man wrote:

"A year ago to-day I had a short letter from you expressing your good will and interest in the Iola Civic Federation, in the success of which you are entitled to a large share of credit, for the samples of forms of organization of similar bodies in other places which you sent me, enabling us quickly to organize a movement which has about as effectively put down graft and punished dishonest officers as we could have hoped for, even in our fondest dreams."

Down in Greenville, South Carolina, the League's work finds appreciation, as indicated in this letter from the secretary of Greenville's Civic League:

"The work done here, perhaps, is not so thoroughly organized as it should be, but the civic spirit is being awakened everywhere, and the National Municipal League deserves great credit therefor, because without

the information and data which you supply we could hardly accomplish anything. You should feel that your efforts are far-reaching."

From Atlanta, Georgia, comes this testimony:

"For a number of years I have been greatly attached to and had an ever-increasing appreciation of the National Municipal League. I have served as recorder of this city, and as a member of the City Council, and as such I was Chairman of the Legislative Committee and afterward of the Finance Committee, and I feel that it is not immodest upon my part, and only justice to the League, to say that through information and suggestions derived by me from the publications of the League Atlanta is richer by many thousands of dollars, and none can now estimate the immensity of the benefits which, in the years to come, the League likewise will bestow."

The cause of municipal improvement has been signally advanced by the business bodies of the United States within the past five years.

The important and effective work of the Merchants' Associations of New York and San Francisco, and of the Chambers of Commerce of Boston, Pittsburg, Cleveland and New York, the Commercial Club of Chicago, not to mention a score of others, whose contributions to municipal betterment have been noteworthy, shows that a great field for usefulness lies immediately in this direction. The National Municipal League believes that experience so far has demonstrated that if the business men and organizations can be more generally enlisted on the side of municipal decency and betterment, their work and influence will be a most effective factor in protecting and promoting their own interests and in solving the numerous and vexed problems confronting our modern cities.

As a leading business man of the Middle West recently pointed out in a letter: "This country in the future is to be much more mutual in all its work, no city or state organization working by itself, but all co-ordinating their efforts for the betterment of all. The highly complex and inter-dependent life of modern times must find its expression in co-operation in a large way; while there may be innumerable organizations, each looking at conditions from its individual point of view, yet all these organizations to be most efficient and helpful must have a relationship to each other."

The National Municipal League supplies the needed co-ordination and co-operation between the various organizations of sundry types that are working for better municipal conditions. It is the clearing house between all sorts of agencies, putting the experience of all at the disposal of each; it supplies the efficient and helpful relationship that has proved of great common benefit.

There are sixty-six business organizations now enrolled as members of the League, and it is our desire to secure in this way the approval and co-operation of every important business body on the continent.

Mayor James Logan of your city has for years been an earnest member of the National Municipal League, quietly but effectively advancing a knowledge of its principles; since his inauguration as the chief executive of Worcester he has given a practical application of our work, which it has been the pleasure and profit of the League to herald through its various publications. In this way the League serves its purposes, inspiring interest and promoting knowledge, and then placing it at the disposal of those who, in turn, will be helped by it in the working out of their own municipal problems.

"Gems that Burn"

instead of "Gems from Burns" might well be the title of the late book of one of Worcester's brightest newspaper women, Mrs. Isabella Mackenzie Tulloch, wife of Mr. Donald Tulloch, secretary of the National Metal Trades Association.

The author fulfills her well-achieved reputation as a keen wielder of the pen and an apt judge of the pertinent by her power of selection from Burns' writings.

At once the reader's attention is halted by the introductory paragraph:

"If in the Vestibule of the World, Listen: If any young man in the vestibule of the world chance to throw his eye over these pages, let him pay a warm attention to the following observations, as I assure him they are the fruit of the poor devil's dear-bought experience. I have literally, like that great poet and great gallant, and, by consequence, that great fool, Solomon, turned my eyes to behold madness and folly; nay, I have, with all the ardor of a lively, fanciful and whimsical imagination, accompanied by a warm feeling poetic heart, shaken hands with their intoxicating friendship. In the first place, let my pupil, as he tenders his own peace, keep up a regular, warm intercourse with Deity."

Such a foreword found in Burns' prose writings themselves, at once arrests the reader with an assurance that it is no hackneyed extraction of Burns' poems he is to meet, but a quintessence from the whole, such as only a journalistic mind can epitomize after careful research and long study.

Life-long love of Burns, and constant familiarity with his words, as well as a Scottish inborn understanding of his inner moods, lends the American reader especial confidence in the extracts.

These are arranged in the attractive paragraphs so liked by busy people of to-day, and alternate the verse with meaty incidents from Burns' life and letters.

The 176-page volume is very attractively issued by the Davis Press, is gilt-edged, broadly margined, and printed in a handsome, clear type. It is ornamented by Mrs. Tulloch's daughter, Christine K. Tulloch, an English High School girl.

Worcester is not only fortunate in having a newspaper woman in whom it can place such confidence as a judicious recorder of its daily events, but it is doubly fortunate in having an enterprising intelligence that, amidst so many exacting duties at home and abroad, can bring forth a book like this.

How Spokane Spent $130,000

During 1909 the Spokane Chamber of Commerce expended $130,000 in caring for the National Irrigation Congress, the Apple Show, the Honorary Commercial Commissioners of Japan, the entertainment of President Taft, maintaining an exhibit at the N.-Y.-P. Exposition, and for extensive promotion work of various kinds.

Boosting Buffalo

"Boost Buffalo" seems to be the slogan in that city. The Manufacturers' Club and the Chamber of Commerce have just consolidated, with a membership of about 2000. The organization will be known as the Chamber of Commerce and Manufacturers' Club, and strong efforts will be made to exploit Buffalo's many advantages as a business and residential centre.

The New Tatnuck School

A Model Twentieth Century Structure, Erected to Take the Place of the Building that Has Housed the Children of that Section in a Most Unsanitary Fashion for Many Years

By Edwin B. Maynard

AFTER several years of persistent effort Tatnuck has come into its own—its new public school being occupied by the children at the commencement of the February term and the formal dedication taking place Feb. 4th. This important incident in the history of Worcester is an excellent example of what civic coöperation can accomplish in the outlying sections of the city. Tatnuck, it should be understood, is that part of Worcester directly west from the centre and beyond Richmond Heights, roughly speaking comprising 1500 acres, with a voting population of about 200.

Tatnuck, way back in the Indian days, was that sort of undefinable territory to the west of the town of Worcester known as "Tataesset," which name in after years was corrupted by common use into "Tatnuck" and applies more particularly to the range of western hills beyond the township where there were Indian settlements, which are described by Gookin in his "Historical Collections of the Indians of New England," written December, 1674.

Later this section was settled by a very thrifty farming class who still occupy most of the territory. Still later small woolen mills were erected and a mill population was settled, and the advent of the electric car line a few years ago brought an influx of new elements, so that altogether Tatnuck as a community is composed of a diversity of people, with varied interests, but all disposed to civic cohesion when matters of common interest are at stake. It has always been considered a most attractive residential corner of the city and has done its full share in the advancement of the municipality.

For some years it had been felt that Tatnuck was deserving of modern school facilities to accommodate its already large child population, and in anticipation of the inevitable increase. It was felt, too, that in order to keep proper pace with the advancement its growth warranted, Tatnuck should organize for the purpose of better voicing its sentiments and necessities; hence the organization of the Tatnuck Improvement Association, Jan. 20th, 1907. Since then there has been no question but that Tatnuck has been most thoroughly alive.

Much has been accomplished in a practical and material sense, and a great deal more in the creation of a sentiment of co-operation, but its crowning achievement thus far is the new public school, which not alone is the pride of Tatnuck, but as a thoroughly modern school building is the pride of the entire city. It is bound to be an attraction not only to visitors from all over Worcester but from other cities whose school authorities are in a search of a thoroughly up-to-date schoolhouse. Be it known that this model building has not only all the good features of a twentieth century schoolhouse but ornamental grounds and one of the city's eight official playgrounds, making it pretty near ideal for the purposes for which it was designed.

The building is of collegiate Gothic architecture, of red brick with gray terra cotta trimmings and flat roof, surrounded by high parapets with open tracery panels. The building sits well back from Pleasant Street, with wide granolithic walks to the entrance, and is to be flanked on either side by handsome lawns sloping to a substantial granolithic curbing embellished with flower beds and shrubbery.

On either side are steel flag-poles, one to fly the national emblem and the other the State flag. The architectural beauty of the two entrances, separate for boys and girls, lends dignity to the entire front. At the rear is the playground of two acres, which land will be developed by the Park Commissioners, in whose authority it is vested, so that games of baseball, tennis, and athletic sports generally, may be indulged in by the children of the entire community.

The schoolhouse is a six-room building with four class rooms arranged for immediate use, and two arranged for assembly hall for school and civic use. Later, as the needs require, these two rooms may be brought into use as class rooms. The basement contains play rooms for stormy weather, accommodations for the janitor, and the heating and ventilating apparatus. On both the first and second floors, convenient to the class rooms, are sanitary ward rooms and retiring rooms for the principal and teachers, with every convenience. The floors are of rift grain Georgia pine oiled. The entire woodwork throughout is of North Carolina pine, stained tobacco brown and varnished. The furniture and fittings correspond in color.

The class rooms are in buff and brown, the corridors in terra cotta, the teachers' rooms and wardrobe rooms, having a southern exposure, are finished in gray and green, the whole desire being to obtain the maximum of light; the especial feature being that the class rooms have an expanse of windows on the north side giving what is known as studio light without shades.

There are ornamental steel ceilings throughout and large bookcases and commodious closets in each class room; also slate blackboards entirely around each room. All plastered surfaces are painted in oil paints. In place of ordinary sheathed walls, burlap is used painted in lead and oil, everything being thoroughly sanitary.

The plumbing is according to the most rigorous modern sanitary methods with sanitary drinking fountains on each floor. A complete system of interior telephones is a great convenience.

The heating is an important feature. Three furnaces furnish the heat for the class rooms, two rooms to each furnace, and the rooms are ventilated by steam radiators placed in vent flues. This system of combined heat and steam carries a uniform temperature of from sixty-eight to seventy degrees when the temperature outside is at zero. Fresh air is introduced in each class room to an amount of thirty cubic feet per minute for each occupant. The ward rooms, corridors, principal's office, basement, together with ventilating system, are heated by direct steam.

This splendid school plant is beautifully situated on rising ground very convenient to the Tatnuck section and to the electric cars which pass along Pleasant Street. It is felt that the erection of this school building will be of great benefit and material advancement to our section of the city. Its construction in so complete and

A. George Bullock
Ex-President

Burton H. Wright
President

D. William Carter
Secretary

George W. Mackintire
Treasurer

Officers State Mutual Life Assurance Company

satisfactory a manner is highly complimentary to Superintendent of Public Buildings George C. Halcott, this being the first complete school building erected during his administration of the office.

A photograph of the new structure showing it as it appears to-day, furnished the inspiration for the cut which appears on the front cover of this issue of the Worcester Magazine.

The State Mutual

Sketches of New Officers of this Fine Old Life Insurance Company of Which Worcester Is So Proud

The State Mutual Life Assurance Company, the largest and one of the oldest financial institutions in Worcester, is a company in which the city feels a just pride. Chartered in 1844, and beginning business in 1845, it is one of the oldest life insurance companies in America.

While it has more insurance in force in Massachusetts than any other Massachusetts company, its business is not by any means confined to Massachusetts, but extends into practically every other state, and the company is, therefore, an important medium of contact between them and the city of Worcester.

At the annual meeting of the company in January, Mr. A. G. Bullock, for twenty-seven years its President declined a re-election as President, but will continue to serve the company as chairman of the board, and will devote considerable attention to its financial and investment interests.

Mr. Burton H. Wright, who was elected President to succeed Mr. Bullock, has been with the company for more than thirty years, and practically all his business life has been devoted to the company in various stages of administrative service. From the position of clerk he rose to that of cashier in 1889; became superintendent of agencies in 1897, and was made secretary in 1908.

Mr. D. W. Carter, the new secretary, is a native of Rutland, Vt., where he was born April 13, 1866. He came to Worcester as a boy, and in 1887 left the Worcester High School to enter the employ of the State Mutual Company. In ten years he rose to the position of cashier, and eleven years later, viz., in 1908, he was made assistant secretary. He has been for many years a zealous and trustworthy assistant to Mr. Wright, and comes to his new duties after a period of excellent preparation. Mr. George W. Mackintire, treasurer since 1899, continues in that office. Previous to 1899 Mr. Mackintire was for ten years assistant cashier of the Worcester National Bank.

When Colonel Bullock became connected with the company, its business was principally in New England, with the bulk of it in Massachusetts. In 1883, when he was elected President, the company had but 50 agents: to-day it has 700.

It had at that time in force $12,000,000 in policies, assets of $3,000,000, and carried a surplus of $650,000. To-day it has insurance in force amounting to $130,000,000, assets of more than $35,000,000, and a surplus of $3,000,000. The increase in insurance in force last year, $7,836,049, was the largest amount ever experienced by the company in a twelvemonth.

Excellent portraits of the four gentlemen referred to in this article appear in this issue of the Worcester Magazine.

March Meetings

A Directory of Some of the Prominent Social Gatherings Scheduled for this Month by Worcester's Clubs and Organizations

Realizing the desirability of presenting a compendium of the leading social gatherings, addresses and meetings of the month in brief and handy compass, so that the readers of the Worcester Magazine may have them before them when they make up their engagements for the month, we present below a list of such events already arranged for, and shall endeavor to make this a feature of the Magazine hereafter:

The annual meeting and dinner of the Worcester Metal Trades Association March 4, at the Bay State House.

Mr. Henry Whittemore, Dartmouth '67, superintendent of the State Normal School at Framingham, and John C. Gray, Dartmouth, '78, superintendent of the Chicopee, Mass., schools, will be the speakers at the annual meeting and banquet of the Dartmouth College Club in the State Mutual Restaurant, March 5.

Twentieth Century Club Saturday evening, March 5, at the State Mutual Restaurant. Addresses by Mr. C. C. Carstens, secretary of the Massachusetts Society for the Prevention of Cruelty to Children, on "The Re-establishment and Protection of the Virtues of Good Family Life," with particular reference to the neglect of children by their parents, and its relationship to juvenile delinquency, waywardness and crime; and by Mr. W. B. Hunter, director of the industrial department of the Fitchburg High School, on "The School Boy in the Shop."

On Sunday, March 6, at the Association Hall, at 3.30 p.m., Rev. Henry Stiles Bradley, D.D., will speak on "The Reality of Jesus Christ."

Tuesday, March 8, regular March smoke-talk before the Worcester Board of Trade. Speaker, Commodore Charles W. Bartlett, U. S. N., retired. Subject, "The Evolution and the Necessity of the Navy."

On Sunday, March 13, at Association Hall, Rev. Allyn King Foster will speak on "The Reality of the Cross."

The Economic Club has in contemplation an exceedingly interesting programme for its March meeting, which occurs the 15th of this month at Association Hall. It is planned to make this a sort of Worcester night, and the subject for discussion will be "The Citizen and the Community." Prominent speakers will address the meeting and Mayor Logan is slated for the first talk.

Thursday evening, March 17, at Board of Trade Hall, mass meeting of Worcester citizens to consider the advisability of forming a Playground Association. Addresses by Hon. James Logan, mayor, and others.

Dr. Steiner will address the men's meeting at Association Hall, Sunday afternoon, March 27, at 3.30 o'clock, on "A Practical Application of Christianity."

Rev. Francis A. Poole will address the men's meeting at Association Hall, Sunday, March 20, at 3.30 p.m., on "The Reality of the Resurrection."

The Worcester Congregational Club will have its March meeting the evening of March 21. Rev. Dr. Edward A. Steiner, professor of applied Christianity in Iowa College, Grinnell, Ia., has been secured as the speaker for the occasion and his subject will be, "The New Immigrant and the New Problem." Prof. Steiner has studied the immigration question for years, and his address cannot fail to be exceedingly interesting.

In Birmingham.

The Birmingham, Ala., Chamber of Commerce has recently completed and moved into a new home. This is a modern seven-story structure, costing $290,000, and was planned and built by the Chamber of Commerce Construction Company with public subscription money. The entire second floor is set apart for use of the chamber itself and other commercial bodies, and the seventh floor is used for county exhibits, the rest being rented for offices. The building is already paying dividends.

Marinette's New Enterprises.

The Marinette, Wis., Chamber of Commerce has recently induced four new enterprises to locate in that city, which will pay wages aggregating $150,000 a year.

Editorial Reflections

An Object Lesson

The necessity for united action and systematic co-operation on the part of the East if it is to retain its commercial supremacy is a subject upon which volumes might be written. It is not so much that the people of this section of the United States are asleep or are blind to their own interests as it is inertia, indifference and ignorance that ail us.

We have been too much inclined to patronize the West, to look down upon it as a factor not to be reckoned with in a financial way. We have been so proud of our monetary strength and of our industrial prestige, we have been so fond of contemplating our own greatness that we have lost sight of the fact that a great empire has grown up to the west of us and now threatens to overshadow us.

It is time for the East to understand that the West resents this attitude. That it not only considers itself as good as the East, but a little bit better. It does not intend to continue in bondage any longer to this section. It considers us a hard taskmaster and it is anxious to secure its freedom.

If any doubt existed that that was the fact it was pretty rudely dispelled in the famous speech made by Governor Johnson of Minnesota at Seattle last year—the last great speech made before his death—in which he declared that "it was time for the West to throw off the shackles of the East."

That it was no glittering generality he uttered, but a sombre fact, was evidenced later when Congressman J. Hampton Moore of Pennsylvania, speaking on the same grounds in defence of the East in general and the Keystone State in particular, was informed by a man from Nebraska that the people in his State accepted Mr. Johnson's utterances literally, and that Nebraska hated the East so badly "*it was ready to secede from the Union.*"

Every Eastern business man whose trade relations carry him into the middle West, to say nothing of the Pacific slope, will tell you the same story. The feeling of the Western men of antagonism towards New England and the East generally has been growing for years, but it has been bitterly accentuated by the Payne-Aldrich tariff, and they now make no secret of their hatred of this section and their desire to cripple it if possible.

The politicians among them realize their impotence to carry through any such programme as proposed by the Nebraskan who wants to secede, but they are determined to gain their ends in another and almost as deadly fashion. No measure calculated to benefit the East stands a ghost of a show to pass the House of Representatives at Washington, for example, unless it contains a much larger measure of benefit to the West.

The Eastern newspapers are singularly silent upon the matters at Washington that particularly interest this section, but the Western newspapers bristle with information with reference to what is going on at Washington that interests them.

In short the Western congressman knows what he wants and goes after it, while the Eastern congressman either doesn't know what he wants or else is too indifferent or too scared to go after it, even when the very life blood of his constituents is at stake.

There are of course exceptions to this rule. Congressman Washburn of this district, for instance, is one of the most faithful, conscientious and courageous members that the House boasts.

The Western congressman has found that the national treasury can be made to disgorge for schemes that the Western State treasuries themselves absolutely refuse to assist, and as a result legislation is more and more making its appearance in both branches that will benefit the West—and the West alone.

Why does not the East do the same thing?

This proposition might not be so unpalatable to us if it was not for one thing, and that is that the money spent on these schemes comes very largely, if not altogether, from the East.

There are now in this country about 90,000,000 of people, and one-third of this number, or about 30,000,000, are located in what is popularly termed as the East. This one-third is not only supporting itself, but is in very large measure supporting governmentally the other two-thirds as well.

Does anybody doubt this statement? *In four of the customs houses on this coast we collect eighty per cent. of all the customs revenues of this country.*

Is this money spent on New England or on the East coast? For 200 years the question of building a canal across Cape Cod has been agitated by the State of Massachusetts, and during the past 25 years alone there have gone upon the shoals of this Cape no less than 1000 vessels, carrying with them cargoes of enormous wealth and 500 precious lives.

Has the government spent a dollar during all this time to make this commerce more secure, to reduce the loss of life or to improve the waterways through which vessels entering and leaving Boston Harbor have to pass? The veriest tyro in maritime affairs knows that it has not.

Has the West been neglected through this period in any such fashion? The last river and harbor bill, just passed the House, carried with it appropriations amounting to $42,355,276, practically every dollar of which is to be spent west of the Alleghanies. And if this bill becomes a law the United States Government will be committed to the expenditure of the enormous sum of $264,000,000 for the dredging of the Mississippi River alone. This sum is to be expended at the rate of $8,000,000 a year for 33 years.

The same bill carries $10,000 to light and upkeep a half completed haven of refuge at Point Judith.

Around Point Judith pass annually millions of dollars worth of goods and thousands of precious lives. The spot is perhaps the most dangerous along the Atlantic Coast, between Cape Hatteras and that graveyard of the Atlantic, the Grand Banks.

For this haven of refuge the West allows the magnificent sum of $10,000.

For the Mississippi, upon which there are today sixty government vessels looking after a river traffic of just half that number of craft, the government proposes to spend $264,000,000.

The value of the commerce that passes Cape Cod every thirty days far excels all the freightage in Mississippi River steamers in the course of twelve months.

Indeed, the day of the Mississippi River steamer has gone, never to return. The railroads on the banks of that river do all the business there is to be done and will continue to, whether the channel of the Mississippi is made 14 feet deep or 140 feet deep.

For the Mississippi River with 30 craft $264,000,000. For Point Judith, past which passes a commerce amounting to millions upon millions, annually, $10,000. What an object lesson to the East!

A White Mountain Forest Reserve

Another matter in which New England is vitaliy interested, and in which she has up to this time received a stone, and one aimed at her head at that, when she has asked for bread, is the White Mountain forest reserve. This matter has been discussed in feeble and impotent fashion by various New England organizations for several years, but not until last year was there anything practical done to bring about the acquisition of the lands in question in the White Hills.

Last year Congressman John W. Weeks of this State introduced a bill into the House calling for an appropriation to buy the necessary tract of land, and the measure finally passed the lower branch by a vote of 159 to 147, but got into the Senate too late for action by that body.

An analysis of the vote on this bill in the House is extremely illuminating reading. North Dakota now has 60,000 acres of forest reserve, yet every one of her representatives voted against giving a forest reserve to New England. Florida has 74,891 acres of forest reserve. Every one of her representatives voted against New England. Nevada has 5,109,415 acres in forest reserves. New England received no aid from that State. Utah has 7,436,327 acres of forest reserves. Not a vote for New England from Utah. Wyoming has 9,000,000 acres of forest reserve, but she refused to vote to give New England an acre. Washington has 12,000,000 acres of forest reserve, but she had no votes for New England. Colorado and Oregon each have 16,000,000 acres of forest reserve, but not a congressman from either State would vote a dollar to be spent in New England for a similar purpose. Montana has 20,389,696 acres under reservation for forestry purposes, and her income from that source alone, last year, was $61,941.46, and yet she refused absolutely to cast a vote to extend this great benefit to the North Atlantic States.

It is idle and unnecessary to multiply words. The same story or one little less bad might be told of practically every Western state. South Dakota alone, among all the magnificent commonwealths west of the Mississippi River, cast her united votes for this bill. May this fact always be remembered to her honor!

It may be argued, and it is argued by some men, that the proposition to conserve the stream flow of the New England rivers by creating a forest reserve in the White Mountains is absolute foolishness. The very man that makes that statement will ordinarily protest the loudest against cutting down the trees on his street because he says the branches with the moisture they retain serve to make the thoroughfare nice and cool in the summer time.

There is at the present time in this country under reservation the enormous sum of 200,000,000 acres of forestry land, and the curious fact about this whole business is that *the water power generated by this 200,000,000 acres is a little over one-fourth of the water power generated by the streams rising in the White Mountains.*

To put it in another way: The streams rising in the White Mountains are the Connecticut, the Merrimack, the Androscoggin, the Kennebec and the Saco, and these five rivers *generate 37 per cent. of all the water power generated by all the streams in the whole United States.*

No single reserve that has ever been acquired at any time anywhere possesses one-thousandth part of the economic value of the one the nation is asked to establish in the White Mountains.

It ought to be said in conclusion, with reference to the improvement of our waterways and the preservation of our forests, that the politicians at Washington representing the Western states are, if possible, more antagonistic to this section than the constituencies they represent.

The Secretary of this Board has recently written the secretaries of more than a score of the leading commercial organizations of the West asking them why their sections were fighting New England, and in reply he has received letter after letter in which the writer has expressed absolute and complete ignorance of the Weeks bill and the attitude of his representative toward it. With one exception the writers have stated that they would be glad to do what they could to help New England obtain this much-needed boon. If this be the correct attitude of these Western commercial bodies, and there is no reason to doubt that it is the correct attitude, the bill ought to pass at this session.

Worcester in the Limelight

Two definite achievements, both of which have brought Worcester directly into the limelight of beneficial publicity during the last thirty days, are the outcome of the team work that is coming more and more to animate the civic organizations of this community.

One is the mass meeting of the railroad trainmen in Mechanics Hall April 2-4, which will be graced by the presence of the President of the United States, and the other is the New England Corn Exposition, to be held in this city Nov. 7-12.

Both of these events have been secured for Worcester by mutual co-operation. The Board of Trade and the trainmen laboring together whole heartedly brought the President to Worcester. President Charles T. Tatman and ex-President George F. Booth of this board went to the White House with the railroad delegation, and left nothing undone to secure the acceptance of Mr. Taft to the invitation of Worcester to come here, and in the case of the Corn Exposition not only the Board of Trade, but the Merchants Association, the Worcester Agricultural Society, and the Worcester Horticultural Society have "jined drives," as Mr. Lincoln used to say, in making this great show a success.

As a result of this unity of effort Worcester has been brought before the whole people in a most helpful light, and she has received already columns of free advertising of the most beneficial sort that she could not have purchased with money.

It has come to be an accepted fact that a city *can* be advertised just as successfully as an individual. Both desire in order to be benefited, one thing—that the reader shall be agreeably impressed when he encounters the name of the advertiser in print. That is the whole secret of successful advertising.

The trainmen's convention, with its great attractions of notable speakers and distinguished men, will do this. So will the Corn Exposition, with its inspiration to every loyal New Englander. It pays to advertise, and the money and effort spent to advertise Worcester are the wisest investment Worcester business men can make.

Local February Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

Retail trade throughout the month has been seasonably good, and although somewhat disappointing in volume, compares favorably with the corresponding month of a year ago.

Local bank clearings for January showed a total of $9,533,408 compared with $7,415,248 for 1909, showing a gain of 28.6 per cent., and a gain of 34.7 per cent. over 1906, when they showed a total of $7,075,983.

Failures for the month have been noticeably few and unimportant, only four having occurred, with liabilities of $5851 and assets of $750, compared with nine of last year, with liabilities of $54,043 and assets of $8847, and eight in 1908, with liabilities of $56,123 and assets of $6201.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

N. P. Julien, Hydraulic Elevator, No. 946,781.

A device to be attached to the plunger of an elevator to effect a hydraulic-braking action at any desired point in the upward or downward travel of the same.

W. H. Sheppard, Printing Presses, No. 946,882.

An attachment for rotary envelope printing presses, consisting of a device for controlling the inking mechanism and feeding mechanism, upon failure of the feeding mechanism to operate properly, consisting of guards which limit the movement of certain parts which, owing to this limitation, cause the mechanism and particularly the feeding mechanism, to move out of operative position.

Fred S. Morton, Wheel or Roller, No. 948,063.

A roller consisting of a rim, a fixed wall extending inwardly therefrom on one side, a ball race held by this fixed wall, and a plate on the other side abutting against the outside of the ball race and connected with the edge of the rim.

C. B. Moore, Supports, No. 948,113.

A support for mirrors or pictures consisting of a frame having an aperture therein, an elastic concave disk provided with a rim inserted in this aperture, and a ring encircling the neck of the disk interposed between the frame and the rim.

S. T. Nakashjian, Eaves Trough Hanger, No. 948,901.

A hanger for eaves troughs, consisting of an arm adapted to be anchored to a roof, this arm being curved and having a slot near its outer end, a standard adjustable in the slot, and a bar to which the standard is connected provided with curved ends to grasp the trough.

Thoughts on Business

"Thoughts on Business," two volumes issued by Forbes & Company, of Chicago, and written by Waldo Pondray Warren, contain several hundred short pithy business editorials that are full of meat, suggestion and inspiration to all workers. The books ought to be particularly valuable to employees, for they are filled with good advice to the "understrapper," while the man at the head of the business will also discover some points in which he can improve, if he studies the pages diligently enough.

Worcester Quotations

Furnished by Thompson, Towle & Company,
311 Main Street, Worcester, Mass.
February 21, 1910.

BANKS.	Bid.	Asked.
Mechanics National Bank	125	.....
Merchants National Bank	167½	....
Worcester National Bank	210	.....
Worcester Trust Company	325	.....
RAILROAD STOCKS.		
Boston & Albany	231	last sale
Boston & Maine common	148	last sale
Boston & Worcester Elec. common	8	11
Boston & Worcester Elec. pfd	42	44
Fitchburg preferred	130	last sale
New England Inv. & Sec. pfd	94	96½
New York, New Haven & Hartford	160¼	last sale
Norwich & Worcester	215	last sale
Providence & Worcester	270	last sale
Worcester, Nashua & Rochester	145	last sale
Worcester Railways & Investment	70	80
INDUSTRIAL STOCKS.		
Crompton & Knowles pfd	147½	....
Denholm & McKay common	200	.....
Denholm & McKay pfd	101	103
Graton & Knight Mfg. common	140	.....
Graton & Knight Mfg. pfd	115½	118
Royal Worcester Corset Co	140	.....
United States Envelope common	50	53
United States Envelope pfd. (ex dividend)	112	115
Worcester Gas Light	270	.....
Worcester Electric Light	.....	290
Wright Wire Company common	102	.....
Wright Wire Company pfd	106	.....
BONDS.		
Amer. Writing Paper 1st 5's	88	last sale
Boston & Worc. St. Ry. 1st 4½'s	98½	100
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5½	basis
Marlboro & Westboro St. Ry. 1st 5's	.....	98
Norcross Brothers 1st 6's	97½	100
United States Envelope 1st 5's	101	102
Worcester Cons. St. Ry. 1st 4½'s	94½	....
Worcester & Marlboro St. Ry. 1st 5's	98	.....
Worcester & Southbridge St. Ry. 1st 4½'s	90	92

Current Events

Personal and General

Jan. 18. Paul E. Holmgren, sealer of weights and measures, elected vice-president and chairman of the Executive Committee of the Massachusetts Association of Sealers of Weights and Measures at the annual meeting of the association.

New England Envelope Company holds annual meeting; declares 5 per cent. dividend, and elects Charles W. Gray president.

19. Union Church holds annual reunion and supper, attended by 400 members.

20. Water in a conduit of the Worcester Electric Light Company causes a short circuit and burns out thirty-six light and power cables.

Senator John H. Pickford of Worcester presents a petition to the Senate to allow members of the Worcester City Council to resign, vacancies to be filled by the other members.

John E. Gunkel of Toledo, known as the newsboy's friend, addresses Worcester Federated Church Brotherhood.

Rev. George F. Haynes of the Second Advent Church accepts call to the pastorate of the Second Advent Church of Chelsea, one of the largest churches of that denomination.

Chief George S. Coleman of the Worcester Fire Department passes his sixty-eighth birthday in his office at department headquarters.

21. Worcester Republican City Committee holds annual meeting and re-elects Julius Beauregard chairman.

Selectmen of Princeton petition the Legislature through Representative Robert M. Washburn to be admitted to the jurisdiction of the Worcester Central Court.

Following its usual custom the Linehan Corset Company presents $300 in gold in $10 prizes to the girls who have made the highest pay on piece work for the past year.

23. Rev. A. S. Garver, the dean of Worcester Protestant pastors, resigns pastorate of the First Unitarian Second Parish Church, to take effect March 11th, the 25th anniversary of his pastorate and the 125th anniversary of the Church.

Rev. Matthew C. Gleason, chaplain U. S. Navy on board the flagship Connecticut, lectures on the trip of the fleet around the world.

Rev. Peter McMillan, pastor of Hope Church, resigns to accept the pastorate of the Memorial Church of Dover, N. J.

24. George H. Torkey, 131 Austin Street, appointed Board of Health Inspector.

25. Announcement made that Worcester Consolidated Street Railway will expend $302,000 in improvements in 1910.

Directors of the Worcester Merchants Association meet and re-elect Edward E. Dodge president for 1910.

26. Congregation of Good Brothers announce that they will build a new synagogue to cost $20,000.

Members of the Scottish Clans of Worcester gather in Horticultural Hall in honor of the 151st anniversary of the birth of Robert Burns.

George C. Whitney Company buys property at 57 and 67 Union Street and at 73 School Street.

Hearing before Committee on Public Service at the State House, Boston, relative to legislation authorizing two additional court officers for attendance at the Supreme Judicial, the Superior and the Probate Courts in Worcester.

27. Announcement made that the cost of committing of insane persons during the year 1909 cost the county $5,238.89.

According to statements in the office of the County Treasurer, wild deer in Worcester County did damage to the amount of $1,500 during 1909.

G. A. R. Relief Fund is swelled $1,997.08 by the week's presentation of the "Drummer Boy of Shiloh."

28. Worcester Merchants Association holds annual dinner with Mr. Hugh Chalmers, president of the Chalmers-Detroit Motor Company, and George S. Smith, former president of the National Clothiers Association, as principal speakers.

31. Announcement made that Church of the Immaculate Conception has wiped out a debt of $5,000 during past year, and now has $2,000 in the treasuty.

Worcester Polytechnic Institute receives a gift of the latest electric storage battery from its inventor, Thomas A. Edison.

George E. Deland of 618 Pleasant Street accepts position with the H. W. Carter Paper Company of Springfield, Mass.

Miss Rose Schneiderman, vice-president of the New York Women's Trade Union League, addresses Twentieth Century Club, on the shirtwaist strike in New York.

Report of the Treasurer of the Worcester City Missionary Society shows receipts for the year of 1909 of $15,020.34, and payments of $14,435.46.

Alderman-at-large Arthur B. Brunell tendered a complimentary banquet by French-speaking voters of Worcester.

James L. Ewell and John D. Long of New York address the Board of Trade at the January smoke-talk on the "Ship Subsidy Question" and "Our Export Trade."

Feb. 1. Worcester Board of Trade Glee Club unites with Worcester High School Orchestra in a benefit for the Garden City movement.

Edwin J. Seward succeeds Walter F. Brooks as the Treasurer of the Royal Worcester Corset Company.

Dr. Edmund Clark Sanford inaugurated as President of Clark College in the presence of many distinguished educators.

2. Discharge pipe of condensing plant of the Worcester Consolidated Street Railway Company power house, carrying 10,000 gallons of water a minute, bursts, tearing up an aggregate area of 150 square feet and seriously interrupting transportation.

Record of fire losses kept by Chief Hiram R. Williamson of the Fire Insurance Patrol shows fire losses for the month of January to have been $222,816.84.

4. Fire starting in the wool waste storage room of S. E. Hull causes damage estimated at $5,000.

Hon. Daniel E. Denny resigns as President of the Worcester County Republican Club.

Baron Kikuchi of Imperial University of Japan addresses the Worcester Economic Club on the relations existing between this country and Japan.

Rabbi Samuel Elkin of the Sons of Abraham resigns to accept call to the Southwestern Synagogue of Baltimore, Md., where he will have jurisdiction over about 10,000 Hebrews.

5. The second Mechanical, Electrical and Textile Exposition of the Worcester Mechanics Association opens with a large attendance.

6. Benefit concert tendered the veteran journalist, Daniel J. Ward, nets $1,002.

7. Suburban trolley line between Worcester and South Framingham opens for traffic. Line is twenty-six miles in length, making a trip of two hours. Fare, 44 cents.

8. Worcester School of Trades dedicated.

9. Announcement made that through the efforts of the Board of Trade, the New England Corn Show will hold its first exhibit at the Agricultural Park in Worcester, Nov. 7 to 12.

Announcement made that two hundred employees of the N. E. T. & T. Co. in Worcester will be benefited by a $200,000 raise.

Directors of the Worcester Board of Trade meet and endorse the Henebery trolley express bill with amendment ensuring local control.

11. Richard D. Murphy resigns position as Executive Secretary of the Citizens' No-license Committee, which he has held for the past two years.

Announcement made that the Worcester Consolidated Street Railway has expended $60,000 in clearing its tracks of snow since Christmas.

14. Worcester Continentals hold annual meeting and re-elect Lieut-col. William A. Lytle commander. Plans considered for entertaining Amoskeag Veterans of Manchester, N. H., and Putnam Phalanx of Hartford, Conn., June 17, Bunker Hill Day.

15. Nathaniel S. Corey, formerly with the Mills Woven Cartridge Belt Company, opens manufacturing plant for the manufacture of a woven cartridge belt.

16. Sherman Envelope Company has annual meeting, re-elects officers and declares a 5 per cent. dividend.

17. Two hundred members of the Masonic Fraternity give a complimentary banquet to Henry L. Green and C. E. Davis, recently made honorary thirty-third degree Masons.

City Hall

Jan. 28. Mayor and Mrs. James Logan return to Worcester from a two weeks' vacation spent in New York and Chicago.

At meeting of the Sub-committee on Schoolhouses of the School Committee, voted to recommend purchase of 16,375 square feet of land adjacent to the Bloomingdale schoolhouse at a cost of $2,046.75.

31. Mayor James Logan submits appropriation bill for year 1910. Total amount is $2,295,838.06, nearly $500,000 less than estimate of the department heads.

Feb. 1. Water Commissioner Batchelder reports a gain of 79,000,000 gallons in Worcester's water supply during the month of January.

Committee on Streets votes to recommend paving on Summer Street at an estimated cost of $20,000.

4. License Board of 1910 organizes with Chief of Police David A. Matthews as Chairman. Other members: George S. Coleman, chief of the Fire Department; James C. Coffey, executive officer of the Board of Health; George C. Halcott, superintendent of Public Buildings, and George C. Moss, superintendent of streets.

9. Mayor James Logan approves salary bill granting increases to city officials amounting to $7,075.

14. City Council adopts orders authorizing the raising of $2,049,838.06 by taxation, and approves the appropriation bill of $2,295,808.36.

Necrology

Jan. 23. William W. Sargent of Worcester dies at his country home in Grafton, from hemorrhage of the brain, aged 49 years 6 months and 13 days.

28. Andrew P. Johnson, aged 75 years 11 months and 7 days, dies in the City Hospital from senile debility and gangrene. Mr. Johnson had for twenty-eight years led the life of a hermit and recluse in the woods about Quinsigamond.

Feb. 1. Gen. Fred W. Wellington of 10 Windsor Street dies of Bright's disease, aged 58 years 8 months 1 day.

7. James and Leonard Hicks of Worcester, brothers, aged 46 and 44 years, killed by the Southwestern Limited on the Big Four road at Yorktown, Indiana.

12. Thomas H. Dodge of 766 Main Street, aged 86 years, philanthropist, inventor and patent attorney.

16. George H. Sawin of 129 Austin Street dies of angina pectoris, aged 60 years 10 months and 10 days. Janitor of City Hall and formerly contractor and builder and owner of a valuable collection of stamps, coins and autographs.

17. DeWitt L. Strauss of 908 Main Street, aged 28 years 1 months and 12 days, dies of scarlet fever and Bright's disease. Mr. Strauss was the principal stockholder in the firm of Gross & Strauss.

WORCESTER BOARD OF TRADE
EACH FOR ALL ALL FOR EACH
11 FOSTER STREET
WORCESTER MASSACHUSETTS
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

FRANK S. BLANCHARD, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
CLARENCE W. HOBBS, JOHN J. POWER, HERBERT H. FAIRBANKS,
JOHN W. HIGGINS, EDWARD J. CROSS, WILLIAM WOODWARD,
WINTHROP HAMMOND, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
WILLIAM FORSBERG, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, WILLIAM H. SANFORD. *Auditor*, H. WARD BATES.

Membership Committee.

E. BRUCE DUNN, MARK F. COSGROVE, GUSTAF A. BERG,
BENJAMIN B. SNOW, HARTLEY W. BARTLETT.

Chairmen of Standing Committees.

Advisory: RUFUS B. FOWLER. *Mercantile Affairs:* WINTHROP HAMMOND.
Arbitration: CLARENCE W. HOBBS. *Municipal Affairs:* CHARLES L. GATES.
Building Laws: EDWARD J. CROSS. *New Enterprises:* WILLIAM WOODWARD.
Education: JOHN W. HIGGINS. *Publication:* GEORGE F. BOOTH.
Foreign Trade: VICTOR E. EDWARDS. *Public Health:* ARTHUR O. YOUNG.
Insurance and Fire Protection: JOHN J. POWER. *Statistics and Information:* MARCUS L. FOSTER.
Legislation: WILLIAM FORSBERG. *Taxation:* HERBERT H. FAIRBANKS.
Manufactures: CLINTON S. MARSHALL. *Transportation and Railroads:* EDWARD M. WOODWARD.
Meetings and Receptions: ARTHUR C. COMINS.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

Senator Bailey to be Our Guest

The annual banquet of the Worcester Board of Trade will be held on the evening of Patriots' Day, April 19, at Mechanics Hall, and the principal address will be delivered by Hon. Joseph W. Bailey of Texas, United States Senator from that State.

Mr. Bailey has been in New England but once before, and the officers of this organization count themselves exceedingly fortunate to have been able to secure his acceptance to their invitation to address us. The day is one that thrills the heart of every loyal Massachusetts man, and as Senator Bailey is one of the most eloquent members of the American Senate, the occasion ought to be, and doubtless will be, an inspiring one in every particular.

Senator Joseph W. Bailey is a native of Missouri, where he was born in Copiah County Oct. 6, 1863. He is a lawyer by profession, and was admitted to the bar when he was but twenty years old. The next year he served as an elector on the Cleveland and Hendricks ticket, that being Mr. Cleveland's first campaign.

In 1885 Senator Bailey removed from Missouri to Texas, and settled at Gainesville, his present home. He was elected to the 52d, 53d, 54th, 55th and 56th Congresses, and on the organization of the 55th Congress was the minority candidate for Speaker of the House.

He was elected Jan. 23, 1901, a United States Senator from Texas to succeed Senator Horace Chilton, and he has remained in the upper branch since.

Senator Bailey is a man of fine presence, a master of jurisprudence, and as polished and eloquent a speaker as the American Congress boasts.

President Charles T. Tatman and Ex-president George F. Booth went to Washington to invite personally the distinguished Southerner to this city, and in securing his acceptance, and in manifold other courtesies, they are under great obligations to Congressman Charles G. Washburn of this city, and to both the Massachusetts Senators.

It is the hope as well as the expectation of the officers of this board that this banquet will be the largest attended and the most enthusiastic in the history of this organization. Nothing will be left undone that can contribute to that end.

The Doings of One Short Month

The month of February in the Board of Trade was as busy as it was short.

A great deal of legislation in which Worcester is directly interested is being enacted at this session of the General Court, and the committees and directors of this board spent much time at the beginning of the month in its consideration. Bills increasing the terms of the Mayor and Aldermen of Worcester to two years, and the Street Commissioners to three years, were favored by the organization, while the bill to extend the term of the License Commissioners to six years was disapproved. The proposition to empower municipal courts to remove license commissioners was also disapproved.

The proposed act to allow aldermen and councilmen to fill vacancies in their number without calling a special election was disapproved, and it is a matter of gratification that this bill has been amended by the City Solicitor, so that this right will not be taken away from the people of the several wards.

The widely-discussed Henebery bill, giving the Consolidated Street Railway the right to operate a trolley freight and express business over its lines in this city, was approved by the directors at their meeting Feb. 10, with this proviso offered as an amendment by Mr. John J. Power:

"Any street railway company acting under authority hereof shall be subject to such regulations and restrictions as may from time to time be made by the Board of Aldermen, with the approval of the Mayor, and shall also be subject to all the provisions of all laws now or hereafter in force relative to common carriers, so far as they shall be consistent herewith and with said regulations and restrictions."

The effect of this amendment would be to give Worcester absolute control over this inestimable privilege that it is proposed to grant the street railway company, and in line with this thought the President of this board, Mr. Charles T. Tatman, went to Boston at the time of the hearing on this bill and urged the adoption of this amendment upon the Committee on Street Railways, who have the measure in charge.

The Canadian Arbitration Act

The Committee on Arbitration and Legislation has had two meetings, one of them a mass meeting, held the last night of the month, to discuss House Bill No. 477, Mr. Robert Luce's bill on arbitration. Mr. Luce addressed both meetings in behalf of his bill, very kindly coming here at his own expense, and a great deal of light was obtained on this most important subject not only by this board, but by the citizens generally. Representatives of the Merchants Association, the National Metal Trades, the Builders' Exchange, and the Central Labor Union, as well as the Worcester delegation to the Legislature, were invited to the meeting Feb. 28, and the discussion following Mr. Luce's remarks was very interesting. Both the employer and the employee had a chance to be heard, and the Board of Trade once more proved its usefulness as a public forum in which, with-

out prejudice, all classes can meet to debate the things that vitally affect our industrial welfare. The Arbitration Committee will report its findings at the next meeting of the directors. No reference to this matter would be complete that did not acknowledge the high public service performed by the press of this city in connection with this agitation. Each of the local papers devoted a large amount of space to the subject, and the board is again under obligation to them for their co-operation and public spirit.

The advisability of establishing a playground association in Worcester will be settled at a meeting called by the special committee of this board having the matter in charge March 17. The directors have made an appropriation to pay the incidental expenses of this meeting, and the committee, which is among the most zealous ever appointed by the President, has labored unceasingly to make this preliminary gathering both representative and successful.

The American Merchant Marine

At the meeting Feb. 10, on motion of Vice-president Edward M. Woodward, the directors unanimously passed this resolution:

"*Whereas*, the present reduced condition of our foreign merchant marine is a source of national weakness, lessening the efficiency of our navy, as confessed by our Naval Board, by 90 per cent., thus exposing us to foreign aggression, and making practically impossible offensive operations against an over-sea enemy, and

"*Whereas*, lack of adequate postal and passenger facilities is greatly hindering the development of our over-sea trade, particularly in manufactured products.

"Therefore, both on patriotic and business grounds be it

"*Resolved*, that this body urge upon Congress such action as will provide sufficient postal compensation to establish swift and regular service in American built steamships, to the principal countries of South America, Africa, Australia, Japan, China, the Philippines and the Levant.

"Furthermore, as the Panama Canal is being constructed at great expense by the American people and should be used to advance American prosperity, therefore be it likewise

"*Resolved*, that this organization memorializes Congress to secure for American built ships flying the American flag free passage through the canal, and to provide that the ships of other nations using that waterway shall pay such tolls as will most adequately meet the interest upon the cost of constructing and the charges of maintaining said canal."

It is gratifying to note that the Humphrey bill, which is calculated to carry into effect the sentiments embodied in this resolution, has been favorably reported to the House and that there appears to be a good chance that it will become a law at this session, thus relieving the United States of the ignominy of having to depend wholly upon other nations for its carrying trade. The manufacturers of Worcester, as well as those of every other industrial centre, have been handicapped for years in their efforts to develop their export trade, by the fact that they have had to depend either on "tramps" or else on vessels whose owners had a larger interest in the development of European commerce than they had in that originating in this country.

A resolution was adopted at the same session memorializing Congress to suspend the operations of the federal income tax on corporations until the constitutionality of the law shall be passed upon by the Supreme Court, the memorial reading as follows:

"*Resolved*, by the Senate and House of Representatives of the United States of America in Congress assembled, that in Section 38, Article 3d, of the act of August 5, 1909, entitled, 'An act to provide revenue, equalize duties and encourage the industries of the United States, and for other purposes,' the requirement for filing returns on or before the first day of March, 1910, be extended until thirty days after final decision by the Supreme Court of the United States, upon the cases now in said court awaiting consideration, wherein questions as to the validity of said section of said act have been raised, and therefore be it furthermore

"*Resolved*, that the requirement in Section 38, Article 5th of the said act, that all assessments shall be made on or before the first day of June, 1910, be extended for a period of three calendar months after the time of filing returns as herein provided, and the time for payment of said tax, so assessed, be extended for thirty days after date of said assessment as herein provided."

The Weeks Bill

A communication from the Boston Chamber of Commerce, asking for the endorsement by this body of the Weeks bill creating a forest reserve in the White Mountains, received favorable consideration. This action is part of a programme in which all New England commercial bodies are uniting. The West and Southwest have so far proved antagonistic to this movement and an effort is now being made to enlist the sympathies of these organizations in the project. Communications have been sent several of them and some very gratifying responses received. One of the very best, coming from San Antonio, Texas, reads:

"*Mr. Herbert N. Davison,*
Secretary, etc.

"In reply to your letter of the 11th, I beg leave to transmit herewith copy of a resolution passed by the Board of Directors of the Chamber of Commerce of San Antonio in session on February 18th:

"'Be it resolved by the Board of Directors of the Chamber of Commerce of San Antonio, Texas, that the relief prayed for before the National Congress by the people of New England from the floods and droughts by the creation of a forest reserve in the White Mountains and the Southern Appalachians, seems a most reasonable request, and that the Texas senators and congressmen are respectfully petitioned to give the matter favorable consideration.'

"Assuring you of our coöperation at all times, we remain,

"Very truly yours,
San Antonio Chamber of Commerce,
John B. Carrington,
Secretary."

Communications from the Royal Motor Works, Inc., with reference to the favored nation clause in the last tariff and its effect upon certain manufactures; from the Davies-Turner Company of Boston, and elsewhere, on the subject of shipments in less than car-load lots, and from the National Tariff Reform Association with reference to the circulation of its literature, received appropriate disposition.

A communication from the Boston Chamber of Commerce with reference to excess charges in more than car-load lots, was referred to the Committee on Transportation and Railroads.

Communications from the Massachusetts State Child Labor Committee, asking for action on five bills which they have introduced into the Massachusetts Legislature, were referred to the Committee on Legislation.

A communication from the Lowell Board of Trade asking this Board to endorse a bill introduced into the House by Representative Harlow of Lowell, to provide for the distribution of franchise taxes in the city or town in which the business of the corporation is carried on, in contradistinction to the present practice of paying over but one-half of it to the city or town, and retaining the other half to provide revenue for the State, was referred to the Committee on Taxation which will report at the next meeting.

The Committee on Municipal Affairs had referred to it a resolution introduced by Mr. A. C. Comins looking to the preservation of the Union Station tower, and the President was authorized to appoint a committee of seven, of which he shall be an ex-officio member, to take into consideration the bettering of existing conditions at the Lake.

The Corn Exposition Committee

During the month the Worcester Advisory Committee on the New England Corn Exposition was created, consisting of Hon. J. Lewis Ellsworth, Mr. E. B. Clapp, Mr. George A. Park, Mr. Walter D. Ross, Mr. Albert L. Stratton, Mr. Charles H. Bosworth, Mr. Herbert N. Davison. This committee has organized with Mr. Ellsworth as chairman, Mr. Davison as secretary and Mr. Stratton as treasurer, and will co-operate with the general officers of the exposition in making the affair the success it is bound to prove. Hon. J. Lewis Ellsworth has consented to act as the general treasurer of the exposition, assisted by Mr. Burt W. Greenwood of this city as assistant treasurer. Mr. Greenwood is a prominent member of the Patrons of Husbandry, and not only that organization but the Horticultural Society and every other agricultural, industrial and mercantile interest in this city will be found actively behind this movement from this time forth.

As the Magazine goes to press the members of this Board are looking forward with pleasurable delight to the last smoke-talk of the fiscal year, to be delivered by one of our own number, Commodore Charles W. Bartlett, U. S. N., retired, who is to address this organization March 10, on "The Evolution and the Necessity of the Navy." Commodore Bartlett has had a most honorable as well as extremely interesting career in the service, and his remarks are bound to be full of inspiration and value to every good American.

From the Field

News of the Commercial Organizations of the Country from Eastport to the Golden Gate and from the Great Lakes to the Gulf

The business men of San Angelo, Texas, have organized a Chamber of Commerce and raised $5000 of a $10,000 booster fund.

The Sellwood, Ore., Commercial Club starts business with a $6000 clubhouse, containing kitchen, dining-hall, assembly, bath, billiard, and reading-rooms. Enough stock at $10 a share was sold to pay for the building and site.

As a result of recent agitation, Buxton, N. D., has a Commercial Club of forty active members, and efforts will be made to increase the number to seventy-five or one hundred within a short time.

Cambridge, Md., has organized a Board of Trade.

The old Amherst, Mass., Board of Trade, which has held no meetings for sixteen years, has been revived.

Easthampton, Mass., has formed a business men's association in that town.

The Membership Committee of the Framingham Board of Trade is making strenuous efforts to boost the organization to 400 members.

A new industrial corporation, with $100,000 capital, has been formed by the LaCrosse, Wis., Board of Trade for the purpose of promoting new industries in that city; $60,000 has already been subscribed, and it is estimated that the balance will be secured in a very short time.

East Greenwich, R. I., is about to establish a Board of Trade. The town has had no business men's organization for a dozen years.

The Foxboro, Mass., Board of Trade advocates playgrounds in that town.

A new industry recently located at Paterson, N. J., through the efforts of the Board of Trade in that city, is the Commercial Bureau Company of New York, which will employ about fifty stenographers and one hundred clerks and office men.

The Dayton, Ohio, Chamber of Commerce, following in the wake of Rochester, Detroit and Atlantic City, is going to send representatives all over the country to attend various conventions, with a view to bringing them to Dayton. All sorts of badges, buttons and literature will be distributed.

The Paterson, N. J., Board of Trade is preparing to advertise Paterson by printing statistics of population, manufactures, banking, schools, health, etc., on the backs of envelopes, and will endeavor to induce the business men of that city to use them in their correspondence. The board is also going into extensive newspaper advertising.

The Chamber of Commerce of Everett, Wash., succeeded in capturing and locating in that city last year seven new industries. Everett is known in the State of Washington as "The City of Smokestacks."

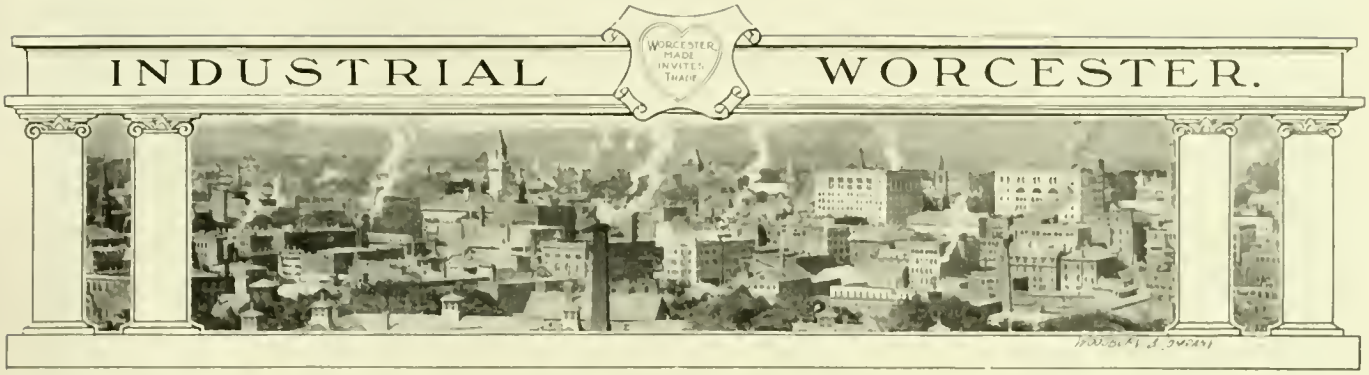
Salt Lake City has recently completed a $225,000 building for its commercial club.

Tacoma, Wash., realizing the advantage of having a permanent home for its civic organization, the Chamber of Commerce of that city, is erecting a ten-story building for its accommodation.

The Cleveland, Ohio, Chamber of Commerce is planning for a 10,000 mile business excursion this summer, visiting the Pacific coast states and Alaska, with a view of promoting the business interests of the Lake city.

The Syracuse, N. Y., Chamber of Commerce is to publish and distribute 5000 96-page booklets, setting forth the advantages of that city as a manufacturing centre, and a prize of $25 is offered for a trade mark for the city for advertising purposes.

The Jacksonville, Fla., Board of Trade is at work trying to increase the membership of that organization to 1000 this year.



The Mechanics Exposition of 1910

In this commercial age "the elimination of the unnecessary" seems to be the watchword of all businesses, and while great railroad managers spend hundreds of thousands of dollars to straighten a half-mile of track or tunnel a mountain to save a few seconds of time, the captains of the industrial world are just as keen to grasp any improvement which will save the seconds in production and thus increase the amount and value of their output.

To emphasize this fact was the principal business of the second annual mechanical, electrical and textile exposition of the Worcester Mechanics Association, which closed Feb. 12. The exposition was not only a mighty fine exhibit of what Worcester can do mechanically, but it was also one of the most artistic and beautiful celebrations ever held in the East. The thanks not only of the Association but of the whole public ought to be extended to both the Worcester Electric Light Co. and the Coghlin Electric Co. for the superb contributions that they made to the show. No city in this country of any size, large or small, is capable of excelling the displays they arranged, and they made hundreds of friends during the week by their enterprise and public spirit. Their display alone was a revelation to most Worcester people and only emphasizes what the Board of Trade has always contended, that we have as capable electricians and as much enterprise here as there are anywhere in the country.

While the attendance on the exposition was perhaps not quite up to that of last year, the lack of numbers was more than compensated for by the enthusiasm displayed by the visitors, and the promotors of the enterprise ought to feel justly proud of their achievement. Worcester as an industrial centre is firmly planted on the map, and it only remains now for her citizens to clinch this advantageous position by proclaiming to the world that she intends to stay there.

The power for the exposition was all furnished by electricity and was installed in Washburn Hall by W. D. Kendall & Co., 268 Main Street. It consisted of two motor generator sets, one 15 and the other 30 horse power, and a switchboard and transformer, transforming the current from 500 volts to 110 and 220 volts for use in the various motors. There were four different kinds of single and alternating current used in the building. An interesting feature in this connection is the fact that before the Crompton & Knowles exhibit could be installed it was necessary to transform the current three times in order to give them the right kind of power for the operation of their loom. In addition to the regular light equipment of the building, there were 600 green lights strung on cables, furnished by the Atlantic Decorating Company of Boston.

American flags gracefully festooned around the walls, supplemented by strings of colored lights depending from the ceiling, greeted the eye of the visitor in the main corridor before entering Washburn Hall; and inside the hall the scene took on a vision of fairyland.

The electrical display was beautiful in the extreme. The white staff pillars surrounding the different booths, surmounted by baskets of flowers glowing with vari-colored electric lights, the posts being connected to each other by ornamental railings, adorned by stucco scroll designs, formed a pleasing and restful picture. The harmonious blending of the electric lights with the general decorative scheme of white throughout, left nothing to be desired, and was the subject of universal praise from the visitors in this part of the building. It was one of the most effective displays of the entire exposition and a tribute to the artistic ability of the designers.

Coghlin Electric Co.'s Beautiful Display

A display that arrested attention the instant one entered Washburn Hall was that made by the Coghlin Electric Co., whose exhibition of electric lamps and fixtures was the pièce de resistance of the exhibits on this floor. The company showed brilliantly illuminated Sheffield, Colonial and Empire designs in showers and hangers, as well as domes for reading and dining tables, the shades of Damascus art glass and silk being entirely new patterns, many of them hand painted works of art. In addition there were shown many beautiful and artistic types of wall and bracket lamps and candlesticks. Electric flat irons, chafing dishes, coffee percolators, and other electrical devices for household use were freely displayed and explained. This company constantly displays all these and many other elaborate designs in its show room, Slater Building Arcade, where can be found numerous artistic and beautiful patterns never before seen in this city.

Alsten & Goulding's Automobile Headquarters

Alsten & Goulding, automobile and tire accessories, in addition to duplicating their fine display of last year, added several new and distinctive features to this year's exhibit, and their booth formed the centre of attraction for motorists. Among the new things they showed was a process of vulcanizing a punctured or injured tire without removing it from the rim. This is done by the use of the Presto tank, and should prove a boon to automobilists. They also displayed a new bugle horn, electric attachments for head and side lights, as well as a line of Packard ignition cables and radiator ornaments of novel and attractive type.

W. D. Kendall Co.'s Important Exhibit

W. D. Kendall Co., who installed the electrical equipment and did all the wiring for the exposition, had on exhibition in Washburn Hall a fine line of Franklin low voltage Tungsten round decorative lamps, this being the first time they had ever been shown in Worcester. They also exhibited a number of Holtzer-Cabott motors and igniters in operation, and displayed many other interesting electrical specialties. They demonstrated the Simplex electrical coffee percolator and bread toaster, and exhibited for the first time a new lamp called the Daylight arc, which burns thirty hours without trimming, at a cost of four cents an hour.

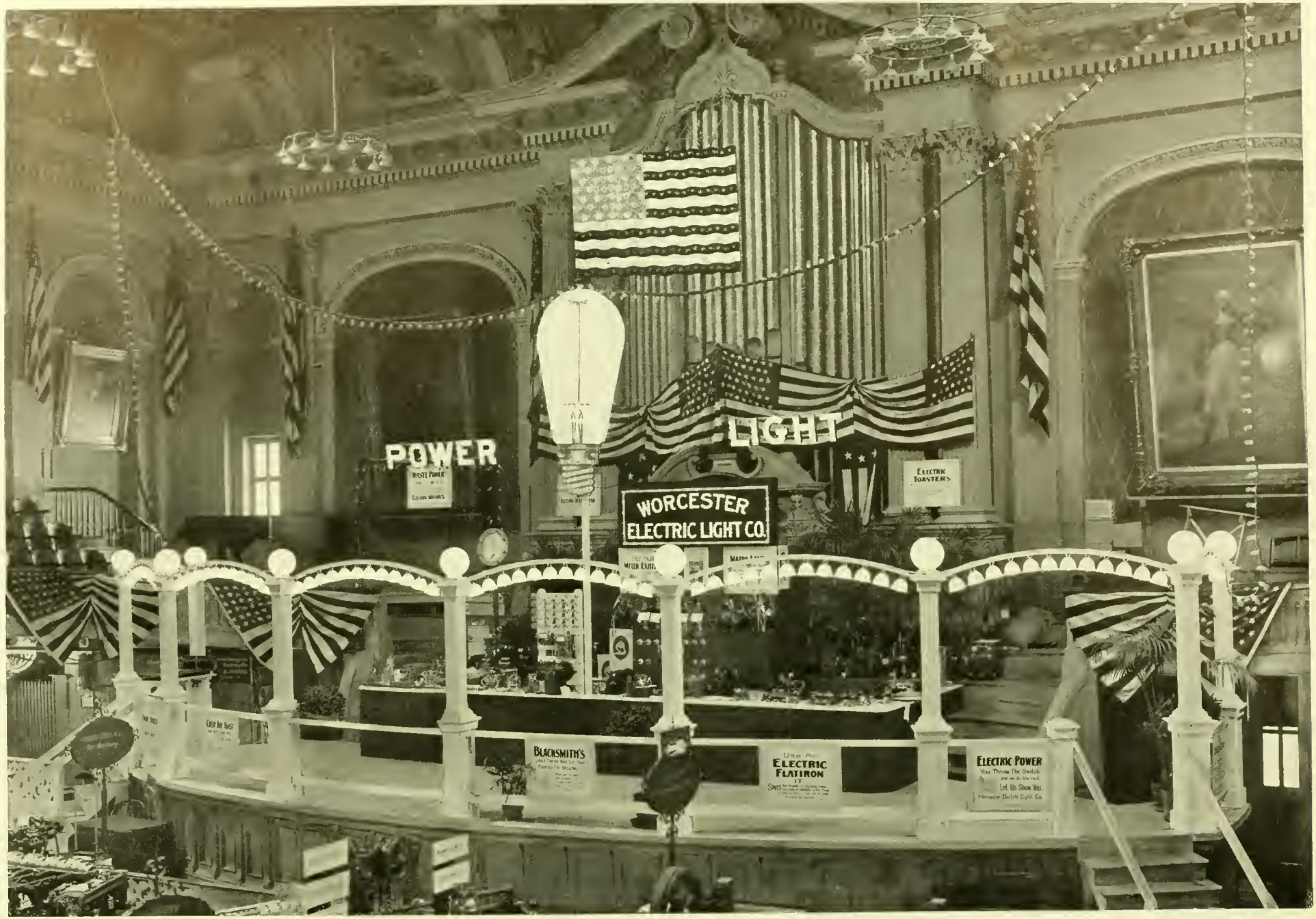
The exhibit of H. L. Rand attracted much attention, it being a display of artificial flowers of all kinds: roses, tulips, carnations, pansies, etc., made from geese feathers. The pure white feathers are selected and, after being dyed the required colors, are made into an excellent imitation of the natural flowers. They always retain their shapes and never fade, it is claimed.

Mr. H. E. Crandell showed a line of nicely built and attractive canoes, an innovation this year being a motor canoe, propelled by a small gasoline engine. Near by the G. E. Stimpson Co. displayed their line of office specialties, including roll and flat top desks, desk chairs, adding machines, typewriters, office phonographs, etc.

Perhaps no exhibit on this floor attracted more attention than that of Ross Bros., who showed a line of electric incubators and brooders, one being so constructed, mainly of glass, that the chicks could be seen picking their way out of the shells. This feature proved to be a great novelty to people who had never before seen nature's process manifested in this way. These appliances are rapidly superseding the old-style kerosene lamp, as in these electrical incubators the temperature is automatically regulated under all conditions, and the chicks are hatched on schedule time.

Wm. A. Duvall & Co., manufacturers of the "Lightning" jar opener, occupied part of a section with the Boston Lightning Rod Co., and the latter exhibit, where lightning was made to order, proved a magnet to an admiring crowd, who listened with great interest to the "professor's" explanation of the greatly feared but little understood natural phenomenon. The company has equipped a great many buildings with its conductors in this State, and reports business good.

The Schervee Art Shop display attracted the attention of art lovers, comprising, as it did, hand carved picture and mirror



MAGNIFICENT EXHIBIT OF THE WORCESTER ELECTRIC LIGHT COMPANY ON THE STAGE

frames, and mouldings- the finest examples of the photographer's art; children's studies, commercial photography, prints and etchings were also artistically displayed.

The Pneuvac Vacuum Cleaner, made in this city by M. S. Wright & Co., furnished an interesting demonstration of the modern method of cleaning carpets, rugs, furniture and other furnishings quickly and easily and thoroughly. By this means there is no necessity for taking up carpets, all the dust and dirt being sucked from the floor and deposited in a receptacle for that purpose attached to the machine.

O. S. Kendall showed a sample of oak mission mantles, tile fireplaces and a flueless gas grate, as well as the New Simplex and Duntley vacuum cleaners.

The Blake Signal and Manufacturing Co. had an exhibit of snap curtain rod holders, a simple device by which window, door and sash curtains can be easily adjusted. This concern also manufactures other specialties, such as insulated staples and tube flux for soldering.

The Worcester office of the Singer Sewing Machine Co. had on exhibition the Singer darner, for darning clothing, stockings, etc., which can be used on any lock-stitch sewing machine, and the J. Q. Adams Co., 120 Boylston St., Boston, displayed the new Webster International Dictionary, containing over 400,000 defined words and phrases.

The Burlingame telegraphing typewriter was on view in this hall and the Royal Typewriter Company also had a fine display of their product, one machine being enameled in white, a novelty in this line.

Miss E. F. Rolston showed a line of artistic embroideries, doilies, centre pieces, pillow covers, and other articles dear to the feminine heart, and Mrs. E. M. Bronner had a beautiful exhibition of artistically decorated china and other ware.

A. K. Gammon, State Mutual Building, showed a line of office appliances, including card indexes, loose leaf and filing systems.

In Mechanics Hall

While the general decorative features of Mechanics Hall were by no means so elaborate as those in Washburn Hall, nevertheless the brilliant electrical display of the Worcester Electric Light Company, which occupied the entire stage, together with American flags alternately draped between the large portraits around the gallery, made an attractive and animated picture. The large aeroplane suspended from the ceiling in the centre of the hall, and the American flag in front of the organ on the platform, formed of red, white and blue electric lights, with a flash arrangement to give it the appearance of a waving banner, made, with the throng in attendance, and the music from the ladies' orchestra, an inspiring and patriotic spectacle. The old hall has never looked finer than it did on some of the really big nights of the show.

Worcester Electric Light Co.'s Triumph

By all odds the most spectacular exhibit in either hall, and one of the most beautiful ever seen in New England, was that made by the Worcester Electric Light Company. The entire stage of Mechanics Hall was used for this purpose, and although complete arrangements for the display were made but a few days previous to the opening of the exposition, yet the results were even more dazzling than were anticipated, and the beautiful array of electric lights elicited unbounded admiration.

On the outer edge of the stage were arranged a number of posts with arches spanning across the top from post to post; these arches were lined with 40-watt Tungsten lamps, each lamp being fitted with a Holophane reflector. On top of the posts, enclosed in a 12-inch opal globe, was a 250-watt Tungsten lamp, which, with the 40-watt Tungsten lamps on the arches, furnished illumination of dazzling brilliancy.

Directly over the centre of the stage hung an 8-foot Tungsten lamp, outlined with two candle-power lamps on a white background, the filament being outlined with 25-watt Tungsten lamps. This proved to be a brilliant feature indeed, and caught the eye of the people immediately on entering the hall.

Just above the large lamp hung an electric flag 5 x 8 feet in size, made up of red, white and blue lamps of two candle-power capacity, wired to a flasher, and operated in such a way as to give the flag a waving effect, as if stirred by a breeze.

From the top of the large lamp to the end post on either side of the stage hung a string of 200 lamps, forming a "rat-chaser," each lamp being wired back to a contact on the flasher, which was operated by a small electric motor. Thus the current "chased" from one lamp to another throughout the entire string.

The company's purpose in making this exhibit was to illustrate to its patrons and the general public the varied uses to which electricity may be applied, to demonstrate the numerous appliances, and to answer, as far as possible, the numerous inquiries. To this end their experts and engineers were constantly in attendance.

One interesting feature, used to demonstrate the use of Mazda lamps, comparing the light delivered and the cost per hour, with carbon filament lamps of the same wattage, was a switchboard arranged with a row of carbon filament lamps, ranging from 6 to 32 candle power; just below each carbon lamp was placed a Mazda lamp of the same wattage as the one above. Directly below the lamps, and in circuit with them, was a watt-hour meter, similar to those used in regular lighting service, except that it was provided with a glass case, thus making it possible for the public to observe for themselves the exact number of watts used per hour for each lamp. Various parts of the meter were at hand, so that the method of construction could be easily observed, and the company's meter expert was present to make explanations.

Another feature used to demonstrate the use of power, and in which the public manifested considerable interest, was a motor generator set, consisting of a 2 horse-power single phase motor, belted to a 3 horse-power direct current generator. The load on the generator was so arranged that it could be increased or decreased, and thus increase or decrease the load on the motor in the same proportion. On the lower part of the board were attached the starting devices for the motor, and just above were two watt-hour meters having glass cases; one meter indicated the power required to operate the motor, and the other, being in the generator circuit, indicated the power delivered by the generator. This outfit was used to demonstrate that the cost of operating an electric motor depends almost directly upon the work performed rather than upon the size of the motor installed.

It will be interesting to note that the 2 horse-power motor was operated at an overload almost constantly for eight hours each day of the exposition without showing the slightest sign of sparking or over heating. This type of motor is coming very much into prominence.

A full line of three-phase and single phase motors was on exhibition, in which the public was very much interested; and the company proposes to extend its three-phase power lines throughout the entire city as rapidly as possible, thus making it possible for its patrons to use three-phase and single phase motors on the same power circuit, obtaining varied conditions from constant speed, variable speed and multi-speed motors.

A large display of heating and cooking apparatus, flat-irons, vibrators and heating pads of various makes, were demonstrated by two lady demonstrators.

The company is well pleased with the interest manifested by all who visited its exhibit.

Across the aisle and in front of the platform the Coates Clipper Manufacturing Company made at times the noisiest demonstration in the hall, but they had to do it in order to show to the best advantage some of the tools they were displaying. The one that attracted the greatest attention from mechanics and the public generally was their electrically-driven chipping hammer used for chipping iron, steel and other metals. The construction of this is a secret of the manufacturers, but that it does its work well cannot be denied. It is driven by a Coates' flexible shaft operating a rotary hammer in the head of the device and strikes a blow equal to a pneumatic hammer.

This tool can be operated, they claim, for very much less than the ordinary pneumatic hammer, and the chip that it produces is as great, if not greater, than that produced by its rival. The Coates people are very enthusiastic over this tool and claim for it many advantages. It was surrounded by a throng during the entire exposition.

They also exhibited patterns of variable speed and breast drills, with which three speeds may be obtained on the principle of automobile transmission; foundry and machine shop outfits for grinding and snagging; the Coates multiple grinder, hand and power clippers; garage motor outfits for burnishing, drilling, reaming, etc., and a special motor truck for large motors. The company specializes in flexible shaft appliances and reports business rushing.

Adjoining was the exhibit of the Brierly-Lombard Company, successors to the old and widely known firm of Crawford Company, dealers in all kinds of mill supplies. They showed, in operation, the Thompson power hack-saw for sawing metal, which comprises some new features not found in other machines of like nature. They are agents for the celebrated Lincoln-Williams twist drills, Burr cold metal saws, and keyseaters and carry a full line of transmission supplies, pressed steel hangers and couplings, belts, gasoline and oil tanks, fire extinguishers, chain hoists, etc. They are rapidly enlarging their business, and reported many inquiries.

A monster leather belt, 160 feet in length, 60 inches wide, and triple ply, worth about $2500, was the centre of attraction in Graton & Knight Manufacturing Company's exhibit of leather belting and leather specialties of various kinds (see illustration on page viii.). In the construction of the large belt referred to, the backbone centres from the hides of 320 steers were used. Sixteen cars were necessary to transport a sufficient number of cattle to produce the above number of hides. This belt is the main drive for one of the largest lumber mills in California.

The two pyramids, one on each side of the entrance to the exhibit, were made up of rolls representing the following brands of first quality (centre stock) leather belting: Heart, GraKnight, GraKnight Dynamo, Special Planer Waterproof, Neptune Waterproof, and Spartan Water and Steamproof. All of these brands of belting are well known to the trade, and are representative of the very best that can be obtained in leather belting. The last three brands are specialties: Special Planer being made in singles only and of extra heavy leather. Neptune is absolutely waterproof, and is made in any thickness and in any ply. Spartan is not only waterproof, but it has the company's guarantee to withstand exposure to steam, gas and acid fumes, as well as heat generated by excessive pulley friction; it is especially recommended for use in places where the conditions are such as would destroy the life and durability of regular leather belting.

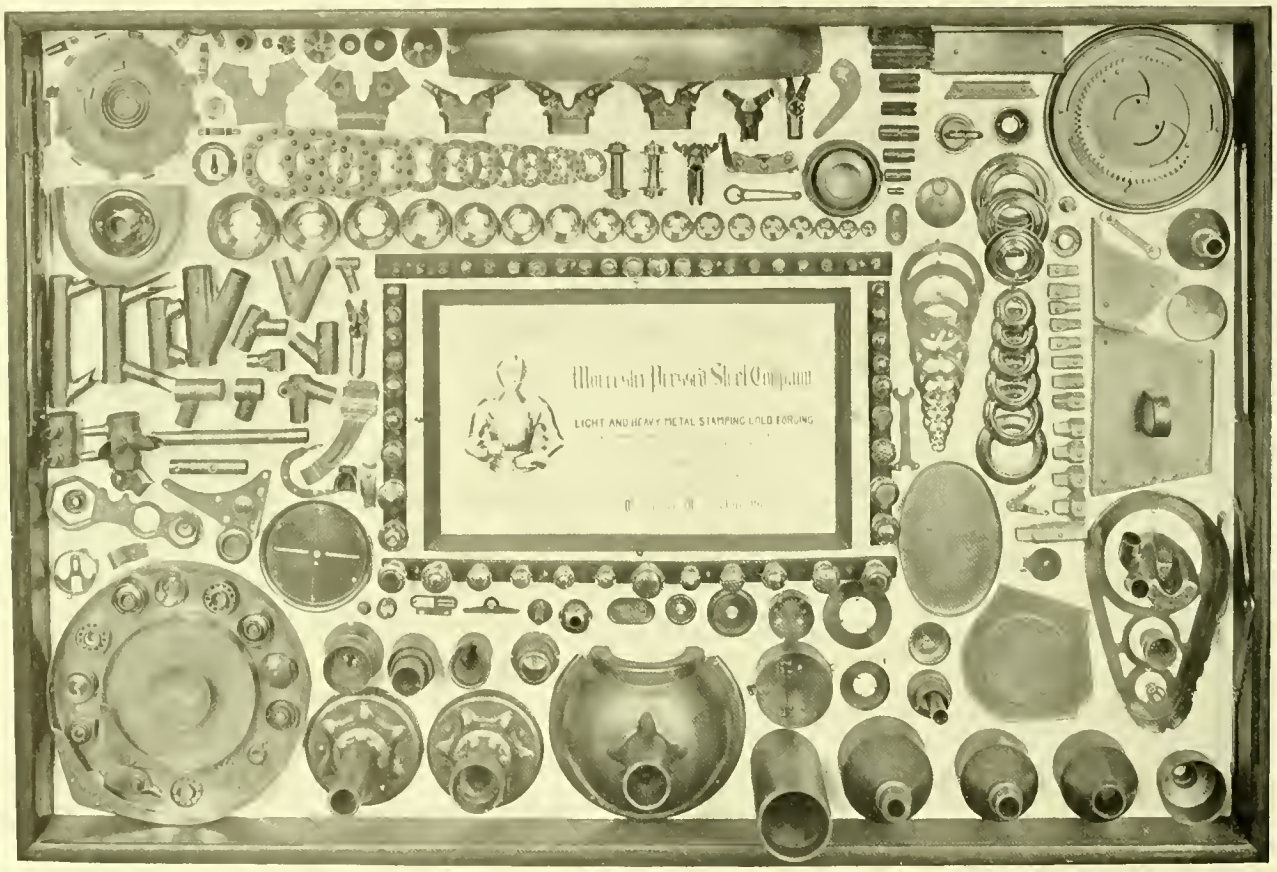
That the Graton & Knight Manufacturing Company have superior facilities for finding a profitable market for those portions of the hide which are not suitable for flat belting was shown by the exhibits of twist and solid round belting and various kinds of strapping, including straps for blankets, looms, skates, trunks, street cars and automobiles.

Leather packings, including gaskets, friction leathers for automobiles, "U" packings or crimps for cotton seed oil mills, packings for oil wells, pump leathers, washers, etc., helped to make this exhibit of special interest to manufacturers who find it necessary to use leather in its various forms.

The Graton & Knight Manufacturing Company is the third largest manufacturing concern in the city of Worcester; its plant covers a floor space of nine acres; it employs in the vicinity of 1200 hands. It is also one of the oldest concerns in the city, the business having been established in 1851. Aside from manufacturing belting and the numerous specialties already referred to, the company also operates its own tannery, with an output of 200,000 hides annually.

The exhibit of machinery shown by Chandler & Farquhar of Boston excited a great deal of interest. They are agents for metal sawing machinery, for cutting steel, iron, etc. By the use of their machines round bar tool steel 4" to 6" in diameter can be sawed through at the rate of one half inch a minute, and machinery steel, which is softer, at about one inch a minute. A peculiar feature of these machines is the construction of the saws, every alternate tooth being higher than the others, and they are ground in such a way that each tooth makes a narrow uniform cut, thus reducing the friction and heat. They reported business good, having taken several orders while here.

The Hobbs Manufacturing Company had on exhibition various types of their box-making machinery in the adjoining space, and they proved most interesting to hundreds of the visitors. This concern is one of the old, reliable plants of Worcester, and the samples shown of its output were all exceedingly creditable.



SOME OF THE PRODUCTIONS OF THE WORCESTER PRESSED STEEL COMPANY

R. E. Kidder's Display

R. E. Kidder, manufacturer of woodworking machinery, displayed a line of sawing machines, which, by reason of their novelty, interested many. A feature of this exhibit was a universal saw bench, a machine designed to cover a large variety of work and, at the same time, admit of all the changes being quickly made. It has three arbors, and permits any one to be brought into axial line instantly ready to run, the other two remaining at rest meanwhile, thus adapting it to a great many kinds of work without any loss of driving power. He also showed a sawing machine with solid frame and tipping table for ripping and crosscutting. This can be adjusted to a variety of positions, and its application is almost unlimited.

Another interesting feature shown in this section was a massive iron press for cutting out envelopes, it being capable of pressing a die through 500 sheets of paper at one operation.

THE BEAUTIFUL EXHIBIT OF UP-TO-DATE LIGHTING FIXTURES BY COGHLIN ELECTRIC CO.—WASHBURN HALL

Mr. Kidder also manufactures a line of adjustable drawing tables, an improved countershaft and floor carrier, band-saws, hand-planer and jointer, an improved boring machine, and Daniels planers, and he has recently designed and put on the market a line of shuttles for narrow fabric looms.

"Sherman Square," where the Sherman Envelope Company had one of its envelope machines in operation, was the centre of attraction at all times. While Worcester's fame as the home of envelope manufacturing is world-wide, yet the actual working of a machine which seemed to possess almost human intelligence, turning out the finished product at the rate of 125 to 140 envelopes a minute, was an intensely interesting and novel sight to many, and impressed the non-technical mind with the wonderful possibilities of modern machinery. The exposition was fortunate in securing this exhibit, for, on account of the pressure of business in the Sherman factory, it was a debatable question whether a machine could be spared at all for this purpose.

The W. H. Leland & Company exhibit of automobile parts and accessories was of more than passing interest to a large number of auto owners and drivers. This concern is now building a new style sensitive drill, and that it is proving satisfactory is demonstrated by the fact that they are at present running two shifts of men, day and night, turning out about 100 drill spindles a month. They also showed a number of marine and auto spark coils, which are meeting with great favor. In addition to their other features they manufacture a very fine type of universal grinder, and are now making about 4000 crankshafts a month. They report business as excellent in every way, the output of their factory being sold eight months ahead.

The Crompton & Knowles Loom Works' exhibit of a loom in operation proved an extremely interesting feature of the week. Under the guidance of one of the company's expert operators, face cloths were woven on a Turkish towel loom, and standing room surrounding the exhibit was at a premium frequently. As has already been told here, before this demonstration could be installed it was necessary to make several changes in the electric current, transforming it at last into a three-phase alternating, but the management deemed the display of so much interest that they went to extra expense to procure it by the installation of additional electrical equipment.

Norton Company Exhibit

The combination exhibit of Norton Company and Norton Grinding Company, consisting of grinding wheels and grinding machinery, is worthy of special mention. It has been estimated that the possible variety of combinations—sizes, shapes, grain and grade, etc., of grinding wheels—that can be manufactured in the Norton plant is something like 150,000.

Many varieties of shapes and sizes of grinding wheels and sharpening stones, together with a large quantity of samples of alundum, the abrasive material used in the manufacture of Norton grinding wheels, were attractively exhibited and illuminated by electric lights. The pure white specimens of alundum and the beautiful dark crystals excited the interest of patrons throughout the entire week. This material used by the Norton Company in the manufacture of grinding wheels is produced in their electric furnace plant at Niagara Falls by fusing the mineral bauxite, a pure form of aluminum oxide, which is obtained from mines in Georgia, Alabama and Arkansas. This material is crushed and graded, and manufactured into grinding wheels at the Worcester plant.

In addition to the exhibit of grinding wheels and raw material from which they are made, the Norton Company displayed an attractively arranged case of India oil stones, showing samples of each of the sixty-one shapes manufactured. It is no exaggeration to make the statement that the India oil stones manufactured by this company have a wider range of usefulness and are more popular in the mechanical world than any other sharpening stone. This line of oil stones has made a remarkable reputation in the mechanical world just as Norton grinding wheels have in their field.

The demand for Norton Company's product has been such that the company has been compelled to increase its manufacturing facilities from year to year. The superiority of alundum wheels is recognized both at home and abroad.

The European business has increased to such an extent that the company has deemed it advisable to construct a modern grinding wheel plant in Germany, which is now being built at Wesseling, Bz. Coln. The new plant is modeled somewhat after the Worcester plant, and it is expected that it will be in operation by the end of the coming summer.

An additional electric furnace plant is being built by the company at Chippewa, Canada.

Norton Grinding Company

Among the interesting machine exhibits of the exposition was that of the Norton Grinding Company. They had on exhibition a 6 x 32" Norton plain machine for cylindrical grinding, which is the smallest of their line of machines, ranging in weight from 3000 pounds each to 20 tons, from 6" swing to 32" swing, and from 32" to 22' between centres.

The Norton cylindrical grinding machines have become a factor in modern manufacturing that must be reckoned with, particularly in the automobile industry. In an interview with a representative of this company during the exposition he stated that only a day or two previous his company had received in its morning mail one single order from a large automobile manufacturing concern for eight of the Norton plain machines, including various sizes.

The grinding machine on exhibition was in operation during the week, and the mechanics who visited the exposition could not help being impressed with its smooth motion, superior finish and convenience of operation. The machine certainly reflects credit on the designer and manufacturers.

Another interesting machine exhibited by the Norton Grinding Company was a running balance machine, a device by which perfect running balance of long and revolving pieces of machinery may be secured. This machine offers a solution to a long-standing and puzzling mechanical problem of considerable importance. The fact that vibration is apparent in machinery where there is a lack of running balance is recognized more today than ever before. With this machine errors of balance and their location can be ascertained in long, cylindrical forms, including shafts and spindles. The Norton Grinding Company have found it a valuable acquisition to their own crankshaft manufacturing equipment.

Besides these two machines, this company exhibited a floor grinding machine and a case showing samples of grinding. To those unacquainted with the finish it is possible to produce with a grinding machine the samples of parts of machinery exhibited, which were finished on a Norton grinder, excited considerable curiosity and interest.

The plain cylindrical grinding machine that was on exhibition was sold during the week to the Heald Machine Company of this city.

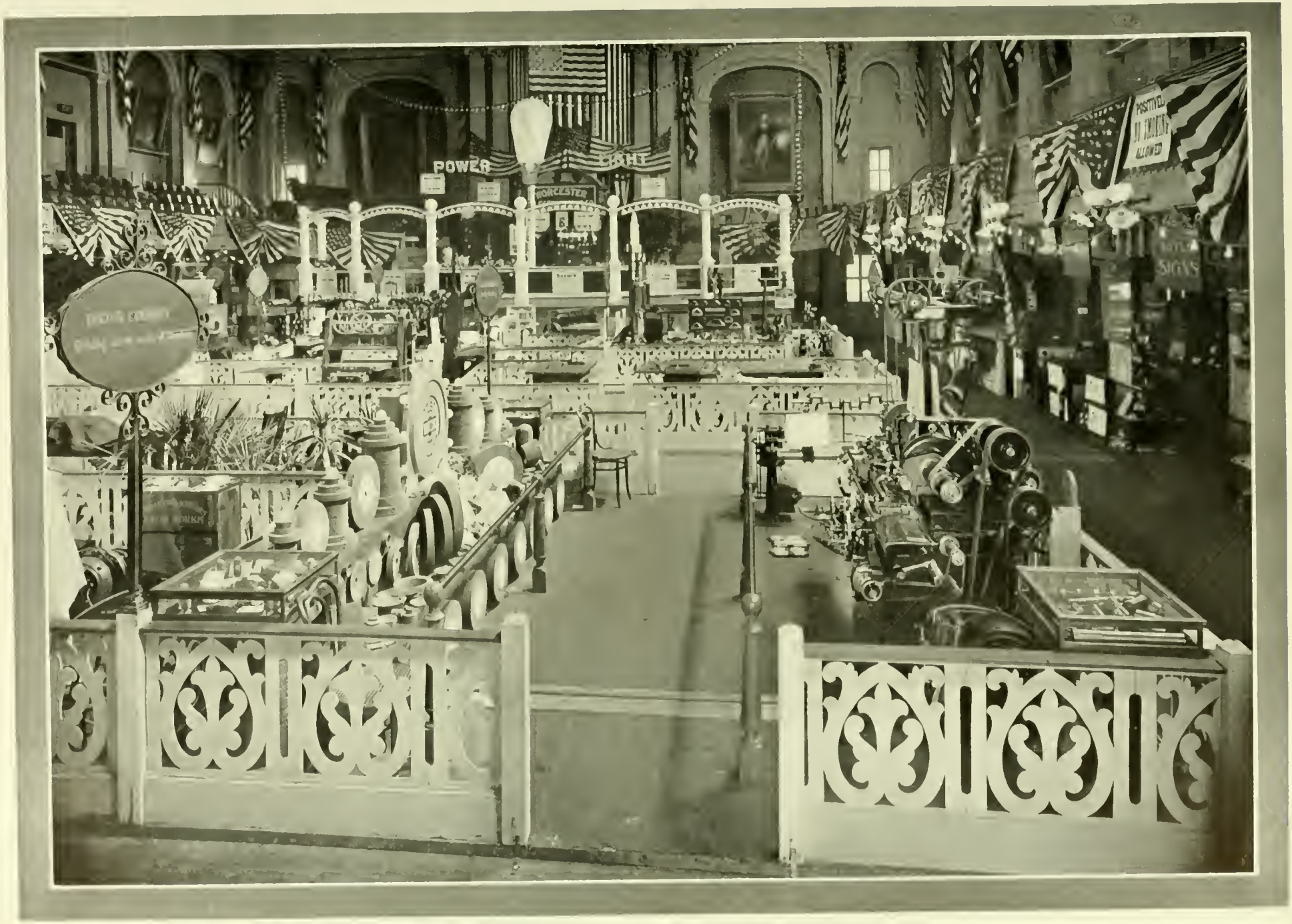
The display of the Hammond Clothing Company was one of the prettiest in the hall. They showed a special line of finished Knapp felt hats, as well as specimens of the raw material from and forms upon which the hats were made.

In addition, they displayed a line of "Everwear" hosiery for men and women, this feature of their exhibit coming direct from the clothing show in Madison Square Garden, New York.

Close by was the exhibit of the Office Specialties, DeLuxe, Inc., which attracted a great deal of attention. This concern manufactures all kinds of office appliances, such as loose-leaf ledgers, card indexes, flexible post binders, filing cabinets, aluminum guide cards, etc., and they displayed some fine specimens of their art, one ledger in particular having an inlaid design of the American flag on the cover. Seventy-five dollars was the price of this book. Although a comparatively new industry in Worcester, they have many orders ahead, and their business is growing rapidly.

In the next space, where its representatives held forth in a prettily decorated booth, the Board of Trade attracted its quota of visitors. Copies of the Worcester Magazine were on sale, as well as the valentine souvenir booklet designed for the Seattle trip of last summer. All sorts of questions were asked, but they didn't phase the Board of Trade representative in the least, for he was right there with the information all the time. The booth was adorned with signs informing the public that "In Worcester We Aim at Excellence," "The Worcester Magazine Clubs with Everything Clubable," "Join the One Thousand Club," "The Worcester Board of Trade is a Clearing House for Information, Telephone 722," and the slogan, "Worcester Made Invites Trade," which has become famous at home and abroad.

"Success dogs the heels of him who makes a thing a little bit better than it has ever been made before," is the motto of the Oakley Steel Foundry Company, and their output justifies their slogan. Included in the fine display the concern made at this exposition was a sample of the new Monel non-corrosive metal. The castings from this metal are claimed to be sound, clean and true to pattern, and owing to the high percentage of nickel in their composition they are as tough as pure nickel; they are also rustless and easily machined. The company makes a



JOINT EXHIBIT OF THE NORTON COMPANY AND NORTON GRINDING COMPANY

specialty of automobile work, crank shafts, etc., as well as a great variety of steel castings, such as nickel steel, carbon steel, chrome steel, nickel vanadium. They employ a large force of men and can make prompt deliveries.

R. H. Hoyle, sign painter, exhibited specimens of his art in this section.

The reputation of the product of the Hill Dryer Company is too well known to need extended comment here, but they were on deck this year as usual with a comprehensive display of their reliable and practical output, including their celebrated balcony and lawn dryers, together with the Hill-Canton sanitary clothes drying cabinet. They have recently moved into new and larger quarters, and report a splendid business.

The Union Water Meter Company's exhibit proved a drawing card, their booth being constantly surrounded by an interested throng of people intent on seeing the inside of a water meter. To most people a meter is a vague piece of mechanism, by which the city or a private corporation is enabled to charge the consumer whatever it pleases, and he has no redress. This concern, however, showed in active operation the inner workings of the "diabolical device," and it is safe to say that the people who have seen it have a greater respect for the accuracy of its readings than ever before. In addition to this, the company manufactures a line of steam and water specialties, including steam gongs or whistles, showing one which it is claimed can be heard for thirty miles.

Duncan & Goodell had a fine display of builders' hardware and mechanics' tools, and in addition they gave a marvelous demonstration of the wonderful powers of an imported high-speed tool steel, in conjunction with the O. K. tool-holder and Whitcomb Blaisdell engine-lathe, which excited the greatest interest among mechanics and machinery men. This steel can be tempered to a greater degree of toughness than any steel ever before produced, it is claimed. It will bite into a piece of machinery or chrome nickel steel and take a three-eighths or half-inch cut at a high rate of speed with the utmost ease, and when the cutting tool is removed from the holder the edge is not even dulled, although the chip will be almost red-hot.

Wells Chemical Bronze Works

Business ability, combined with "quality" goods, is bound to leave an impression in the public mind, as evidenced by the interesting display made by the Wells Chemical Bronze Works, Inc. Although this concern has been in operation in this city only about two years, the excellence of its product has been and is such that "Wells Chemical" means standard of merit, in every way. This company, of which C. A. Harrington is president and F. C. Harrington treasurer, has one of the most complete plants for turning out the finest kinds of brass, composition, aluminum, copper, and babbitt metal castings; in fact, its facilities for producing special mixtures of this nature are unsurpassed. The company is making a specialty of an anti-friction metal, which it is claimed possesses qualities superior to any other similar metal on the market, and the results of exacting and thorough tests to which it has been subjected in railroad, electric railway and machinery, and high-speed wood-working work, etc., have demonstrated its efficiency beyond question. Nothing but new metal is employed, no scrap of any kind being used, and this, combined with the highest efficiency of skilled labor, tends to produce a finished product excelled by none.

Central Supply Company

Owing to the limited space assigned the Central Supply Company, it was impossible for them to exhibit with any degree of satisfaction more than one of the many departments of their business. Mr. Earl Sexton, manager of the water supply and power department, took the matter in hand, with results very creditable to him and his company.

In addition to the several lines and departments of the Central Supply Company, including, as it does, jobbing, retail, engineering and construction of steam, gas and water-supplies, and power plants, and which business has reached large proportions in this section of New England, it is through the water supply and power department that this company is most favorably known throughout this section.

With their facilities and experience, they can readily handle any work presented in these lines, from the small pumping plant for domestic use to the largest town supplies, including not only the installation of pumping and power machinery, but the installation and in many cases the supplying of water from their system of driven or drilled wells.

Their exhibit consisted of an assortment of hand pumps of many facilities and sizes, power pumps, hot air pumping engines, gasoline engines of several designs, and a line of supplies generally used in the installing of pumping plants.

Mr. Robert Meacham, one of their genial representatives, was present with this exhibit to meet all parties interested.

The Standard Rug Company displayed a variety of rugs made out of old carpets. These should not be confounded with rag carpets or rugs, as they are entirely different in character.

The Stewart Boiler Works had a fire engine boiler of Amoskeag type, and a gasoline storage tank on exhibition.

W. J. Smith & Company of New Haven, Conn., manufacturers of reamers and other machine tools, and the Colton Combination Tool Company, Springfield, Vt., were co-tenants, and displayed attractive exhibits of their products.

H. B. Ward, mason repairing, exhibited a section of the roof of a house with staging erected thereon.

Art leather goods, consisting of pocketbooks, burned and painted leather sofa pillow covers, throws, etc., were shown by William A. Harding.

The Worcester Pressed Steel Company

The Worcester Pressed Steel Company showed a sample case, an illustration of which appears in this issue, containing a few pressed steel and other pressed metal parts made by this concern.

These samples comprise parts for automobiles, motorcycles, bicycles, flying machines, ball and roller bearings, cream separator machines, stove trimmings, pipe collars and flanges, speedometers, skate rolls, textile and electrical fittings, furniture, gears, wrenches, stair treads, adding machine cases, cold rolled steel, case hardening, autogenous welding, tanks, etc.

Among the new equipment recently installed by this concern for handling heavy work is a large double-action cam drawing press weighing about 60,000 pounds and producing a pressure of 500 tons, embodying special features designed by the Worcester Pressed Steel Company. The power for operating this press is supplied by an individual 35-horsepower motor, belted direct. It performs two operations at each stroke.

The Worcester Pressed Steel Company use this press especially for making automobile brake drums, rear axle housings, gear cases, car seats, pulleys, hubs, clutch parts, and other heavy pressed metal parts.

For the first time they exhibited a new Worcester product—the Worcester pressed steel pulley. It is claimed that this pulley is lighter, stiffer, truer, stronger, safer, cleaner, quicker, more economical and efficient than any other pulley on the market. It is clamped to the shaft by gibbed keys and not a rivet used in its assembly. It has no spokes, but disc sides, which do not fan the air or collect dirt and dust. This pulley is patented and produced by the Worcester Pressed Steel Pulley Company, a new organization subsidiary to the Worcester Pressed Steel Company.

They also showed samples of steel, copper, cast iron and aluminum, all thoroughly welded to each other by their autogenous welding process.

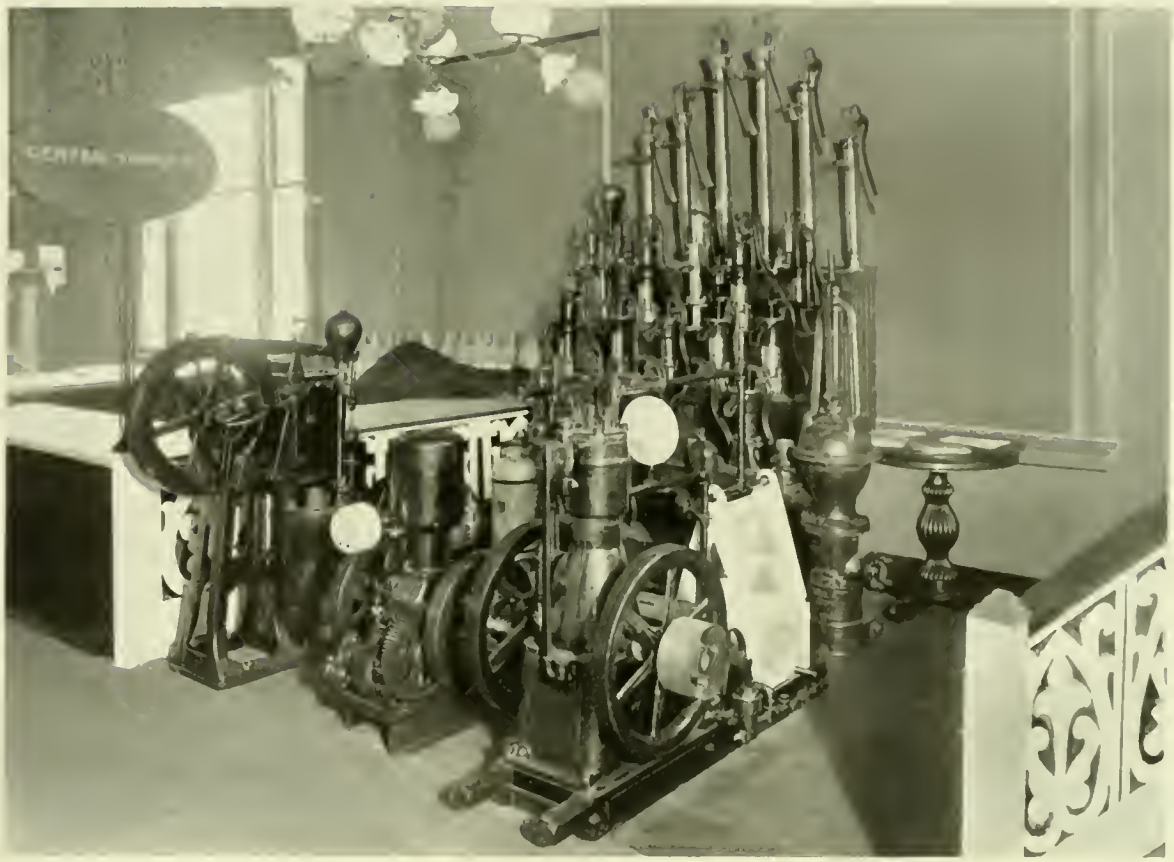
Their cold rolling mill produces about five tons of steel a day, and they carry the largest stock of cold rolled strip steel in the East.

Prentice Brothers exhibited in operation a 24-inch upright drill, which has since the show been shipped to a customer in Buffalo. They also displayed a 12-inch high speed geared-head lathe. This particular machine has been purchased by the United States Government, to be set up on the battleship Florida.

The other tools exhibited by Prentice Brothers comprised a 4-foot radial drill, 26-inch gear-speed change upright drill, 16-inch sensitive drill, and an 18-inch double back-geared engine lathe.

Worcester Elastic Stocking & Truss Company

The exhibit of the Worcester Elastic Stocking & Truss Company of 58 Front Street was a magnet for many. The company had in operation a machine for knitting abdominal belts and elastic stockings, the invention of an English clergyman. It was originally made of wood, and while subsequently iron and steel were introduced into its construction, the functions it performs are of such a peculiar nature that it is not susceptible of many improvements, and none have been made on it for over forty years. Elastic belts, stockings, jackets, spinal supports are knitted by hand to conform to the exact measurements of each particular product, thus insuring the careful attention to details which should enter into the construction of articles of this character. This company also manufactures a line of improved double and single trusses, the springs being made of the finest ribbon steel and tempered especially for its use.



CENTRAL SUPPLY COMPANY

UNION WATER METER COMPANY

EXHIBIT OF POWER PRESS, SAW BENCHES, DRAUGHTING TABLES AND NARROW FABRIC SHUTTLES BY R. E. KIDDER

In addition a complete line of hospital and sick-room supplies is carried in stock, such as back and shoulder braces, crutches, canes, bedside tables, bed rests, bath cabinets, wheel chairs, etc., and they make a specialty of fitting and adjusting shoe arch supports.

The company occupies a large amount of floor space at 58 Front Street, and has a large specialized trade which is constantly increasing as the superiority and nature of its output become better known.

The Stevens automatic elevator door and gate lock this year as last was one of the novelties of the show. The demonstration of the lock in a miniature elevator left no room for doubt that by its use in hotels, office buildings, apartments, etc., the list of horrifying accidents caused by people falling down elevator shafts would be materially reduced. It is impossible to open the door of an elevator equipped with this lock until the car platform is even with the floor of the building, and the installation of these locks will mark a new era in accident insurance of this type.

H. G. Barr had on view a comprehensive line of sensitive drill presses, including machines of from one to six spindles each.

The International Correspondence Schools made a display of their various text-books used in their different courses, together with the Victor typewriter, a new machine just being placed on the market.

The west corner ante-room proved an attractive spot for many people. Tait Brothers, ice cream manufacturers, were the hosts here, and dispensed large quantities of their product.

John Hanson showed at this point a working model of his patent automatic pump, which had some unique features for irrigating small farms.

Fowler & Company

Across the way Fowler & Company's exhibit attracted attention. This was a display of their patent adjustable curtain and drapery rods, which embrace several unique and valuable features. These rods are complete in themselves, and by means of a novel combination of rubber tips, spiral springs, and a spiral locking device, they can be applied to wood, stone or metal, and require no screws, nails or brackets to hold them in position. Their facility of adjustment is one of their strong points. This is accomplished by an extension feature peculiar to these rods alone, which consists of a spiral threaded inner bar with a corresponding thread on the outer tube, thus permitting the rod to be extended or reduced in length by simply turning one over the other. The rubber-tipped sockets contain spiral springs, so that by extending the rods half an inch longer than the space it is to occupy and compressing the spring to the required dimensions, the rod can be placed in position, and when the spring is released the rubber tips hug the sides of the opening so securely that they will easily sustain any weight to which the ordinary curtain rod is subjected. This simplicity of adjustment does not obtain in any other extension rod on the market, and as the rubber tips can in no way mar or deface the finest polished wood or metal surface, it makes the Fowler rods particularly adapted for hanging draperies at windows, fireplaces, in front of bookcases, in fact anywhere where a sash rod can be used. Fowler & Company also manufacture a patent spring pole socket in sizes from $\frac{1}{4}$ to $1\frac{1}{2}$ inches, which is a very useful device in certain cases.

FINE EXHIBIT OF BRASS, BRONZE AND ALUMINUM CASTINGS OF WELLS CHEMICAL BRONZE WORKS

One could not for a moment doubt that the Carlton Engraving Company aims high after looking at its exhibit. This was a model of an air ship suspended from the ceiling in the centre of the hall, with the figure of a man grasping the steering wheel of the apparatus, all parts of the craft being covered with the company's advertisements. It certainly was a novel conception and attracted great attention.

The Leicester Polar Spring Water Company displayed their wares in the east ante-room, and adjoining in the main hall E. B. Luce had an artistic and interesting exhibit of commercial photography and lantern pictures.

The Worcester Mailing Company had an interesting demonstration of multigraph letter duplicating machines and addressographs, and showed a new wrinkle in this line consisting of a duplicator operated by a small electric motor.

ADJUSTABLE CURTAIN RODS, BY FOWLER & COMPANY

WORCESTER ELASTIC STOCKING & TRUSS COMPANY

The Growth of One Worcester Concern

On September 1, 1866, Henry Brannon, then sixteen years of age, tiring of the humdrum existence of farm life and being anxious to seek a larger field of activity, left the old homestead in Princeton, and secured employment in the wood-room of the Crompton Loom Works in this city. Worcester then had a population of about 25,000, and the Crompton Loom Works—now the Crompton & Knowles Loom Works—was but a shadow of its present self. After working for the Crompton people for five years, he left and went to the Taylor & Farley Organ Company, where he remained about two years. January 20, 1874, Mr. Brannon bought out the wood-working business at 21 Cypress Street, and with one man began the manufacture of builders' finish, store and office fixtures, door and window screens, and has built it up to its present proportions, employing now some twenty men, it being one of the largest wood-working establishments in the city. Mr. Brannon carried the business on alone for thirty-six years, until his son, Henry G. Brannon, attained his majority last November, when he was taken into partnership with his father. It is now Mr. Brannon's intention to relieve himself of the details of the business as fast as possible, and eventually to turn the entire management over to his son.

ALSTEN & GOULDING, AUTOMOBILE ACCESSORIES

The Howe Employment Exchange

Ralph H. Howe, who has been for six years associated with Mayor James Logan as private secretary, has resigned his connection with Mr. Logan and opened an employment office in the Knowles building in this city. Mr. Howe has for some time felt that there was a field in this city for the establishment of an employment exchange conducted with an integrity and honesty of purpose which would at once secure the confidence and respect of employers and employees. He makes a specialty of furnishing high grade office and commercial assistants, bookkeepers, stenographers, shipping clerks, etc., for which no charge is made the employer, a very moderate fee being collected from the applicant after a place is secured. Every applicant for a position must submit to a thorough examination as to qualifications, and those failing to demonstrate their fitness to fill the requirements will not be recommended.

Woodbury & Company, Inc.

Owing to an important increase in the business of some departments of Woodbury & Company, Inc., artists, engravers and art printers, the departments of half-tone and line engraving, and the preparing of copy for this work, have been disposed of to Messrs. Howard and Wesson, who have been managers of these departments for several years.

Woodbury & Company, Inc., retain the same offices, art and photographic rooms at 4 Walnut Street, but have been compelled to secure additional space for the development of certain lines of this business.

Anatomical Construction of the Foot

THE ROYAL WORCESTER
ARCH SUPPORT SHOE FOR MEN

The Charles Case Shoe Company of this city, which is making a specialty of its arch support shoe, is very anxious that the public shall understand the anatomical construction of the foot in order that it may better appreciate the wisdom as well as the necessity of the highly specialized product that it is putting out.

In order to accomplish this end the company recently caused to be published in the Boot and Shoe Recorder the following exhaustive article on this subject, which can be regarded as an authoritative utterance:

"The foot is an organ by which we stand, walk or run, and the general bony framework of the foot is strikingly like that of the hand. The graceful arch of the foot composed by the tarsal and metatarsal bones is firmly joined together by a thick layer of cartilaginous structure, not only preventing a liability to displacement, but giving to it an elasticity, sprightliness and strength which could never be obtained by a single flat bone. On its under or plantar surface are seen stretching from the heel forward to the toe a number of ligaments, the principal one of which is the plantar ligament, which possesses great strength and elasticity.

"The following numbers, accompanied by the various names which science has bestowed upon these parts, will enable the reader to identify the corresponding numbers in the diagram:

"1, tibia; 2, astragalus; 3, os calcis; 4, scaphoid and key bone of arch; 5, internal cuneiform; 6, metatarsal of big toe; 7 and 8, first and second phalanges of great toe; 9, articular cavity between tibia and astragalus; 10, synovial capsule between astragalus and os calcis; 11, calcaneo-astragaloid ligament and entrance of sciatic nerve; 12, synovial capsule between astragalus and scaphoid; 13, calcaneo-scaphoid ligament; 14, calcaneo-cuboid ligament; 15, synovial capsule between scaphoid and internal cuneiform; 16, synovial capsule between internal and first metatarsal; 17, metatarso-phalangeal articulation of great toe; 18, phalangeal articulation of great toe.

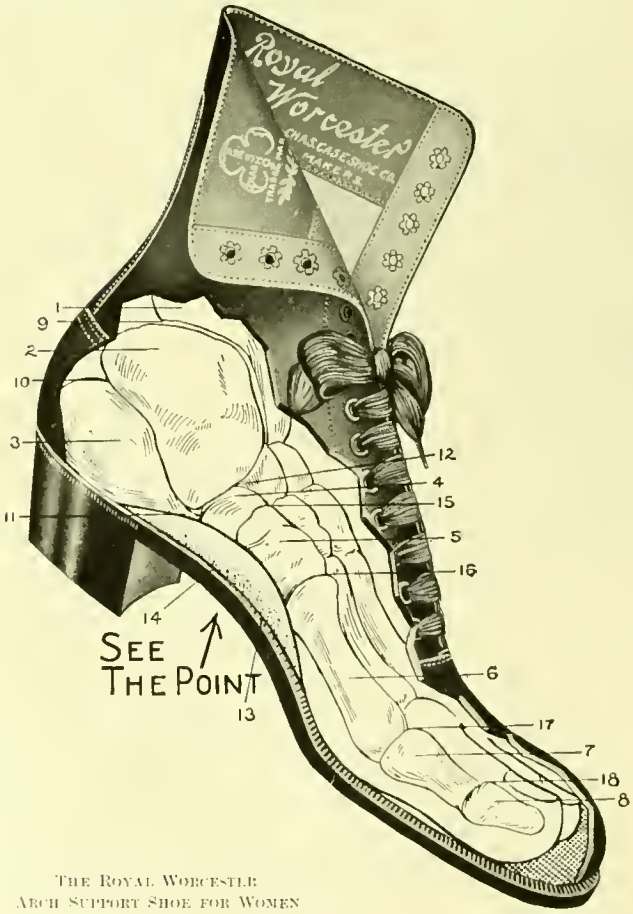
"The toes naturally should be straight forward in a line with the general contour of the foot. This is their natural position. The graceful arch of the instep, the elegance of its form, its marvelous elasticity and strength, all combine to make the foot, if properly shod, not only of great perfection and beauty, but admirably fitted for the manifold duties which it is called upon to perform.

"Man must depend upon his foot to maintain his equilibrium in the performance of any duty. Not only does the foot too frequently sustain heavy weights, but it must carry them as well. It likewise affords a firm support. Were it not for this beautiful mechanism, the constant jarring and concussion which would be experienced in the act of walking would inevitably destroy those delicate organs, the brain and the spinal cord, and death would immediately follow.

"Few persons in civilized nations have perfectly natural feet. The beauty and utility of the human foot is marred, its movements are impeded by incasement in unnatural boots and shoes. These, instead of conforming to the form and shape of the foot, compel the foot to adapt itself to them. The consequence of ill-shaped shoes and weakened arches in same is corns, bunions, cross-toes, ingrowing toenails, large joints, and eventually flat feet, straining the ligaments, cords and muscles across the tender and sensitive arches, causing excessive pain, and sometimes being actually crippled.

"The sole of the foot, like the palm of the hand, is covered by a dense fibrous sheath, the plantar fascia, running from the heel bone to the metatarsal bones in front. It sustains the arch of the foot, and protects the vessels and nerves beneath. Immediately beneath it lies the flexor brevis digitorum, arising from the heel bone and being inserted into the sides of the second bones of the lesser toes by four tendons which are perforated by the long flexor tendons. Just below this is the flexor accessorius, which is attached to and aids the tendon of the long flexor. There are numerous other small muscles in the foot which give it complicated movements.

"The great sciatic nerve, extending from the spinal cord down the thigh, splitting at the knee, crossing the instep of the foot and connecting at the junction of the scaphoid and astragalus bones of the foot, is one of the most vital nerves of the body, and one that should be protected most. As is very often the case, the falling down of the arch of the foot, and pulling away of the tendons and muscles where they are connected very near the junction of this nerve, cause very serious troubles, which are daily growing worse. This big nerve supplies the entire nerve life of the leg and foot, and should be as well and as carefully protected as the brain itself. The prevalence of flat or splay feet, and the spreading of this disease, caused by improperly made shoes, is appalling to one who has these diseases to contend with continually. A low, broad heel, properly placed, with a solid shank that has some elasticity built into it, with flexible soles, will do more to cure and prevent these ailments than any other one thing known to science."



THE ROYAL WORCESTER
ARCH SUPPORT SHOE FOR WOMEN

The WORCESTER MAGAZINE Illustrated

"WORCESTER MADE INVITES TRADE"

PLANT OF THE BRADLEY CAR CO. AS IT APPEARED MARCH 15TH, 1910
GROUND BROKEN OCTOBER 12, 1909

APRIL, 1910

$1.50 per year

Published by the Worcester Board of Trade
WORCESTER, MASS., U. S. A.

15 cents the copy

COMMODORE BARTLETT'S HISTORIC ADDRESS

Central Supply Company

A visit to our warerooms will repay any intending purchaser

Telephone 4440

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

Foster, Commercial and Mercantile Streets Worcester, Mass.

TRADE MARK

Established 1871

Incorporated 1888

H&R ARMS Co

Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. APRIL, 1910 No. 4

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

EVOLUTION AND NECESSITY OF A NAVY—By the late Commodore Charles W. Bartlett, 89-93

"THE CALL OF THE EAST." Atlantic Deeper Waterways Convention at Providence—By Congressman J. Hampton Moore, 94-96

FROM DEATH TO LIFE. The Story of the Rejuvenation of Kingston, N. Y., Commercial Body—By A. D. Pardee, Secretary, 97

WORCESTER'S TELEPHONE BILL, 98

THE NEW UNION STATION AND ITS APPROACHES. With a Ground Plan, 99-100

NEWS OF THE COMMERCIAL ORGANIZATIONS OF COUNTRY, 100

EDITORIAL REFLECTIONS, 101-102

Worcester and the Western Rate Cases—By Commodore Bartlett.

The President's Visit to Worcester.

DEPARTMENTS, 103-105

March Trade Conditions.

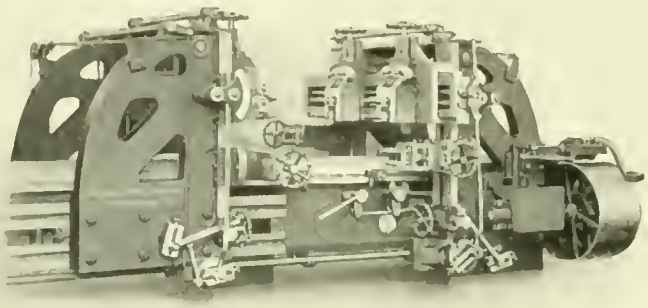
Worcester Patents

Current Events.

BOARD OF TRADE ACTIVITIES, 106-107

INDUSTRIAL WORCESTER, 108-116

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers. 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

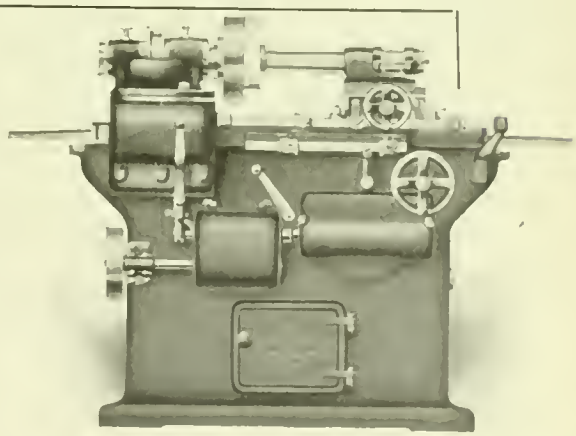
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden A. 3, Germany and Austria.

WE MANUFACTURE

GRINDERS



CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,

ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Coates Flexible Shaft

Will stand all kinds of abuse. Can be twisted and turned in any way without interfering with the tool or business end.

Place the motor on the floor, take your two pound breast drill and "DRILL." On account of its portability and great utility in inaccessible places and tight corners, the Coates Outfit turns many puzzling time-consuming jobs into simple propositions.

Learn More About It

Send for book W

COATES CLIPPER MFG. CO.
Worcester, Mass.

HOWARD - WESSON - COMPANY
INCORPORATED
ARTISTS AND ENGRAVERS
DESIGNERS OF ADVERTISING
CATALOGUE MAKERS

WORCESTER MASSACHUSETTS

Gentlemen:-

The Howard-Wesson-Company has purchased of Woodbury & Company the Art Department and the business of making half tones, duotones, three and four color plates, line and wood engravings.

Messrs. Howard and Wesson have long been identified as officers and managers of the latter Corporation, and with the same efficient staff of artists and engravers are well prepared to design, illustrate and engrave for high class advertising.

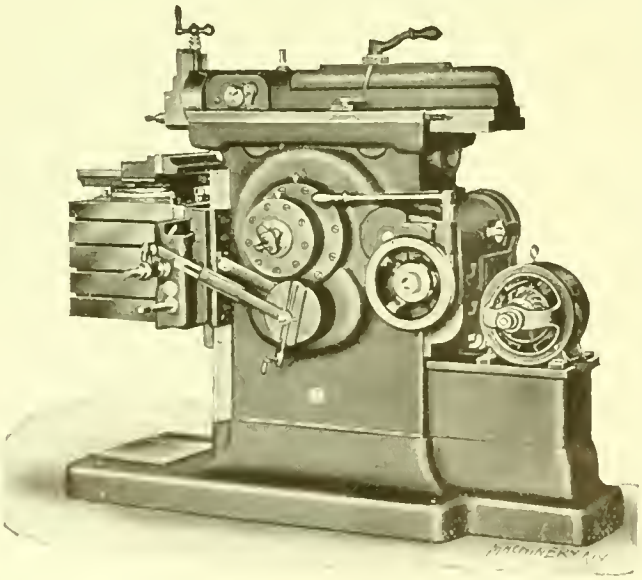
They thank you for the favors so generously accorded in the part and trust that future dealings may be even more pleasant.

Yours very truly,

Howard-Wesson-Company
A. C. Howard Pres.

The same location - #4 Walnut Street.
The same telephones - #2670-2671

18″ All-Geared Drive Shaper



A Shaper because of the quantity and quality of work that it will turn out puts shaper-production on a new and higher level.

STOCKBRIDGE MACHINE CO.
WORCESTER, MASS.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

The Evolution and Necessity of a Navy

The Historic Address Delivered by the Late Commodore Bartlett Before the Board of Trade, March 8th—His Last Public Utterance

THE Evolution and Necessity of a Navy are subjects which would not ordinarily interest men like yourselves, so closely allied with the business interests of this country, were it not for the large sums of money which are being annually expended for the preservation and construction of our navy. There may be a doubt in the minds of many of you whether the United States is not trying to hold an unnecessary position in naval supremacy. After an active experience of over forty years in that branch of the government service, I hope my ideas may have some weight in convincing you that this money is profitably expended. During this time I have seen the navy rise from the period of the dark ages of its existence to that of prosperity.

COMMODORE BARTLETT

In 1881 Mr. Hunt, then Secretary of the Navy, commenced the new navy in the construction of the Dolphin, Chicago, Boston and Atlanta, steel cruisers, which formed what was then called the "White Squadron." Our people were proud of this squadron; they were sent all over the world to show that we had something of a navy, more creditable than the ships they had seen for many years. Others were appropriated for, and added each year, until 1888, when two battleships, the Maine and Texas, were authorized, both of the second-class or coast defense vessels. In 1891 commenced the construction of the first battleship of the first class, and of the real navy of the present date, which has been added to from year to year, until we ranked second only to Great Britain in naval strength, France, Germany and ourselves being nearly equal; but *only* for a short time, because both Germany and France have plans already made which will place them well in advance.

Our navy now consists of 27 battleships completed, either in commission or in reserve, 6 more in different stages of completion, all the equal of any in the world that were constructed about the same date; 10 armored cruisers, differing only from the battleships in thickness of armor, size of guns and power of engines; these in case of action would be used in the battle line; 27 cruisers of different classes; 16 torpedo boat destroyers, 16 more building; 36 torpedo boats; 12 submarines, 15 building; 48 monitors and gunboats; 3 scouts, and auxiliaries; and many other auxiliaries, such as colliers, transports, tugs and dispatch boats.

The size of the battleships has constantly increased in the last twenty years from the Oregon type, of about 10,000 tons displacement, to the Arkansas type, of about 26,000 tons, which is now being constructed. The question now arises: what can be gained by increasing the size to 30,000 tons? During the last six years there has been a decided change in the ordnance of battleships; up to that time the armament was usually four 12-inch guns in two revolving turrets, one forward and one aft, and a large number of guns varying from four to eight inches in the main broadside battery.

The first "Dreadnaught" built in England had all of her main battery 12-inch guns in pairs in five turrets. The medium battery was discarded and a secondary battery of twenty-seven—12-pounders (very light)—for the protection only against torpedo boats. This change was brought about by the many new devices for both sighting and training the guns, and the increased accuracy of distant fire, which determined the policy that ships should carry as many of the largest guns as possible, in order to disable her antagonist at a distance of five or six miles before she would come within the effective range of the smaller guns. In the latest ships designed there will be twelve 12-inch guns in six turrets. It is desired to carry as many large guns as possible, and at the same time not reduce the other qualifications, such as armor, speed and steaming radius. Speed has already been increased from fourteen to twenty-two knots per hour, the highest speed, allowing the big-gun type of vessel to choose their distance for action. The "Dreadnaught" type of vessel has been adopted by all the naval powers.

If the Size of the Gun Should Be Increased

to fourteen inches, as there are some indications at present, and experiments are being made, it would be a question whether there should be ten or twelve of such guns on each battleship. It was the proposition during the Newport conference to have ten 14-inch guns instead of twelve 12-inch guns; the 14-inch guns to have relatively diminished velocity, that the wear and tear on the gun might be less with the same result. It was finally decided that the experimenting should be on the line of increasing its velocity and effective power, commensurate with the increase of calibre. The latest type of 12 inch guns weighs about 56 tons, and carries a projectile weighing 870 pounds, with a charge of 250 pounds of powder. It is admitted that the 14-inch navy gun is more powerful; the type now completed and under trial fires a 1400-pounds projectile, with a charge of about 360 pounds of powder. The striking force at the muzzle would penetrate twenty-three inches of face-hardened armor, or twelve and one-half inches at a distance of 9000 yards, the distance at which modern battles on sea are supposed to be fought. The 12-inch gun would penetrate only eleven inches, at the same distance. If twelve 14-inch guns were decided upon, it would require a 30,000-ton ship to have the same endurance, protection and speed. These projected larger battleships are giving the foreign naval authorities much food for thought, as the increase in size must necessarily increase the draft.

As the approaches to the largest arsenals, especially in England and Germany, are somewhat shallow, they will look with disfavor upon any such change, necessitating immense expense to make their harbors navigable. The United States is better situated than the others in having deeper water in her larger ports.

If the United States were bounded only by the Atlantic and Pacific Oceans, Canada, Mexico, and the Gulf of Mexico, and our borders were fortified with powerful fortresses, to prevent invasion, a navy might be unnecessary; but even then, a strong one would insure us from any danger, to which we may be exposed, isolated as we are by broad oceans, from any nation from whom we could possibly expect trouble; we should be able to meet them outside of our own territory, on the sea. But this is not all; by circumstances not wholly desired we have interests beyond the sea which must be protected, and they must be protected largely by a navy. This country cannot be invaded if we control the sea on our coasts, as no army can exist if their communication and source of supplies are cut off.

Japan, in the war with Russia, could never have kept her army in Manchuria had she not controlled the sea. War is not desired, nor invasion expected, but we must be prepared for it; public disputes and differences must occur, and sometimes public opinion, swept on by the utterances of the yellow press, will largely favor extreme measures, and finally nothing but war can follow. Our people claim to be peaceable, yet we are a very proud nation and resent anything which would appear to affect our honor, by some *slight*, real or imaginary, by a foreign nation. We wisely quote Washington's warning against "entangling alliances," but too readily forget his warning—"Prepare for war in time of peace." Russia, in the period from 1898 to 1904, believed herself *invincible*, from the vastness of her empire; as a result she was obliged to accept defeat and humiliation from a small nation who, through foresight, sound organization, and with the help of judicious alliances, was able to beat her more powerful rival. Neither wealth, resources, numbers of people, nor even armed forces, are therefore decisive factors in war; more important than these are foresight, preparation and organization.

In the year 1823 President Monroe's celebrated message caused considerable excitement, and has since been known in this country as the Monroe Doctrine, not a law, but a policy which has never been sanctioned by legislation, nor its meaning clear. Its policy, not one of aggression, opposes the European countries from obtaining American soil, or influence in this country. It does not contemplate forcible intervention in any legitimate contest, but it protests against permitting any such contest to result in increase of European power or influence. If we propose to assume such a stand, we must see that the national forces are in a condition to uphold it if necessary. This duty is self-assumed, and

It is Partly for Self-protection

We are dealing with a very peculiar people, whom we propose by this policy to protect; even they are *far* from being in accord with it. They are jealous of our prosperity, and fear that it may be only an excuse to increase our own possessions. As some of these countries have been governed, they will always have more or less serious trouble with European nations, as well as our own, and power, strongly exerted, is the only force which can have any influence with them.

There is at present a growing German colony in southern Brazil, to which large numbers of emigrants are going. Is there any possibility that at some future day, when Germany has a sufficiently powerful navy, that these people, who have strong ties for their native land, may seek to detach themselves from Brazil, and unite with Germany? Would this be contrary to the Monroe Doctrine? Would our people be willing to retire from their policy so frequently advanced that opposes European countries from obtaining American soil? If they were not willing, what could be done, if we did not have a navy, and not one for defense only? As our manufactures increase we must find a market outside of our own country; our commercial agents, our tourists, and our missionaries must be protected, and our diplomatic representatives must be respected. I have been told many times by those of different ranks in the diplomatic service in foreign countries, how different was the respect paid them, and the influence they have gained since the Spanish War, in which the navy took a prominent part.

In order to perfect the personnel and make use properly of the ships and material provided, constant work and drill are necessary, each ship as a unit and the fleet as a whole. Much criticism was heard when the Atlantic fleet was sent to the Pacific. In the first instance, it was a menace to Japan; this was wrong, as no country is acting offensively if she moves her fleet about her own coast. England has recently changed her system, now concentrating her ships, so that an enormous fleet can be sent to the North Sea at once; and yet it is not open to criticism. We had reached the point, for the first time, when we had a homogeneous fleet; we had previously had little experience with a large one. The handling of a fleet in all kinds of weather and conditions was of the greatest benefit. When we steamed out of Hampton Roads it was difficult to keep our relative position, swinging in all direc-

tions like the tail of a kite, closing, opening out, and stopping, but long before reaching our destination, it was corrected, and all the maneuvres were performed with those large ships, in the day, at night, or in a fog, in the most correct manner. This would be necessary, in case of battle, at high speed, when slight errors might cause the greatest disorder, and only by constant practice can this be acquired. The knowledge that our fleet can be sent around to the Pacific in less than three months, would keep our coasts protected, as no enemy could do serious injury or permanently invade our country unless they could permanently command the sea.

Our fleet must not be divided, as was strongly urged by the people of San Francisco, for their protection, when the Atlantic fleet was there. It would be suicidal. If we have not ships enough for two fleets, each strong enough to cope with any enemy, they must be kept together. If such division had been made and war had followed, it would have been unfortunate. Although none of the officers, either in command of the fleet, divisions, or ships, may ever be called upon to repeat that cruise, it has established a record, how it was accomplished and what would be necessary, to make it successful again, and disproved the pessimistic idea that it was impossible for such a fleet to make the cruise within the limited time and without great danger. We must have a powerful fleet and one able to cope with any that can come to our coast, or some day we shall see our coast desolated, the ships we have wiped out of existence, or obliged to seek protection in our harbors, and an enemy free to land at their pleasure.

We hear frequently that we cannot compete with the nations of Europe in building a navy: it is too expensive for us to consider. How much better use can we make of the price of one battleship: how many poor people it would aid: how many schools and colleges could be built and sustained: thousands of ways the money could be used, which *at present* might seem more satisfactory. Shall we simply look to the present, for our decision, as to a navy or no navy, for, unless we can have one, sufficiently powerful for our government to sustain the policies adopted, we need only to have a small one or none. If war should come, we could close our harbors and perhaps oppose on land any invading force, leaving our colonies and unprotected ports to be devastated and destroyed.

We need a navy for defense, which means we do not wish it for aggression, or for unnecessary pressure upon another nation. We are not free always from acting aggressively. In the past, we obtained California from Mexico,

FLORIDA FROM SPAIN,

and perhaps other instances could be mentioned where we have aggressed upon the legal rights of other countries; at the same time, whether in these instances we were right or wrong, we must hold to the idea that we prepare only for defense. A navy for defense does not mean for us one that can only resist an attack, leaving the enemy to attack when its own interests are involved, and to choose how and when to fight; such a one would have no influence in diplomatic relations, nor prevent any country from attacking us or our policies. In war a belligerent has two tasks before him. He has to defend himself and hurt his enemy. The more he hurts his enemy, the less is he likely to be hurt himself. This defines the great principle of offensive defense. We must defend all our national interests, and be ready to take the offensive if necessary. War will not probably be with reference to our own country, but to our external relations, which give us important questions to consider. What we need is a navy so powerful that it will compel a foreign power to send many ships, in case of war, if they wish to show force on this side of the world. Great Britain has by far the strongest and best navy in the world; if we were able to have half as many ships or strength as she has, it would be doubtful, considering the exigencies that might arise, if she would send a fleet from her coast to attack us. England desires to be a friendly nation to us; our common ancestry, common traditions and literature, and our financial interests are so closely allied that we have a very remote possibility of trouble from that source. With a navy of that size, say thirty-five battleships, with the proper auxiliaries, ready and not *too antiquated*, no other country, as at present prepared or in prospect, would attempt an attack upon any of our possessions, as it would necessitate their sending a much greater number, considering the distance from their home.

At the commencement of the Spanish War, the disparity between the armored fleets of the United States

U. S. S. OHIO, IN WHICH COMMODORE BARTLETT STEAMED OUT OF HAMPTON ROADS

and Spain was inconsiderable. The Spaniards possessed one advantage, in that they had a homogeneous group of five armored cruisers, fast and similar in all respects, making its power very great. The Spaniards believed they had the more powerful navy. The Spanish Minister of Marine stated that he believed positively in the triumph of his naval forces, and that they would conquer on the sea. "The squadron, under Cervera, can go to the United States, as they have nothing to fear, ship against ship, and failure is impossible." This was the feeling among those in power, but not so with Admiral Cervera, who was told that he would be given command of the armored fleet, if war was declared. He stated: "I will accept, knowing, however, I am going to a Trafalgar, which could have been avoided by allowing me to expend 50,000 tons of coal in evolutions, and 10,000 projectiles in target practice; otherwise we shall go to a Trafalgar, remember what I say." The Spanish navy had been neglected, both in material and drills, owing to the practice of economy; the preparation for an unforeseen trouble had never been considered.

At the breaking out of this war, says one *then high* in authority, "*Our* sea coast was in a condition of unreasoning panic, and fought to have little squadrons scattered along it, everywhere, according to the theory of defense always favored by terror." This terror, through popular and political pressure, required the keeping of a large part of our naval forces in Hampton Roads or in the north, until Cervera's fleet was located in the West Indies; not realizing that it would be impossible for it to make offensive operations on our coast, without at least recoaling, after a long cruise across the Atlantic.

The results gained by our navy in this war were due to our being sufficiently prepared to meet a small sea power. If our policy had not been changed from that which existed but ten years previous, we should have had reason to be frightened and terrorized.

We often hear the remark that the expense involved is greater, because the ships become *obsolete*, in a very short time, almost before they are launched. This is *not* true, although improvements are being made continually in the many machines for propulsion and ordnance; some of which are afterwards found to be impracticable. A ship built in the near future may have advantages and improvements, but it will not be so radically different as to change the order of battle. The present battleship is not an invention of today; it is the outcome of an evolution of many years, from the theories and experiences of the highest scientists among the world's naval architects and seamen.

A Ship Will Wear Out in Time,

and as she does so she must step back into the reserve, but even then she has not entirely lost her usefulness. Our battleships of the Oregon, Massachusetts and Indiana class, designed twenty years ago, are not of the latest type; many improvements have been made since they were designed, but by keeping them in repair and changing some details, they are yet serviceable for the battle line.

There are many who believe that we can protect ourselves against any enemy by means of torpedoes, torpedo boats, submarines, and perhaps might be added, aerial balloons. The efficacy of the torpedo boats, torpedo boat destroyers and submarines is *largely moral*; they are a constant menace to a battleship, and are strong auxiliaries to every fleet in the day of battle. A man may brace his nerves for an engagement, but to feel himself in danger at all times, night or day, from being blown up, is a different proposition.

A battleship should never anchor on an enemy's coast or where there is any danger from torpedo boats. If possible she must be under way and always moving at some speed; if obliged to anchor she must be surrounded by mines and picket boats.

Torpedo boats of all classes are mere shells, filled with machinery for great speed and armed with torpedo tubes for the discharge of torpedoes. They are almost defenseless against attack, depending wholly upon speed and effect of their projectiles; a single well-aimed shell will disable them.

The submarines have never been used in actual warfare, but have been experimented with to such an extent that no country can be without them. They will add greatly to protection against blockade, but cannot be relied upon as the *sole means* of defense. They can be navigated on the surface, partially submerged and wholly submerged. They are difficult to detect as only the periscope or outlook appears at intervals above the water, in order to locate an enemy. Owing to their slow speed, lack of endurance, uncertainty of the torpedos, their sole means of attack, and the movement or the battleships, their success can only be limited; as has been found in experimenting in fleet manœuvres. The French fleet in 1904 *were at anchor,* expecting an attack, and while every possible observer was on lookout, they were unaware of the proximity of submarines until they were actually struck by an exercise torpedo, fired by one of them.

Aerial navigation is being much discussed at the present day. One aeronaut claims that he could carry dynamite equal to the weight of two men in his aeroplane, and with it destroy everything, and he further asserts that the aeroplane is now an effective implement of warfare. The dirigible navigators claim still more, even the end of armies, warships, kings, rulers and houses of legislation; that the British navy and the immense manufactories of Great Britain could be destroyed by one of Zeppelin's airships in eight hours, from Cologne. Is it possible that these aerial enthusiasts think that nothing would be done to oppose them? Such implements of warfare would, in my opinion, be the simplest to put out of commission. It would not require two years to build an opposing craft. Guns, with slight changes, firing projectiles with a burning fuse, will be able to destroy dirigibles at a great height, as they present a large and excellent target.

Aeroplanes are still experimental, as at present constructed; the necessity of favorable weather, places to start from and alight, limited height they can reach and very limited weight they can carry, impose limitations upon their use in war. For scouting and for observation purposes all aerial crafts may be of value, but at a great risk to those who navigate them.

At the Hague Conference in 1907 "it was *agreed* to forbid the discharge of projectiles and explosives from balloons and other methods of a similar nature," which doubtless extends to airships and flying-machines of every kind. This is to continue until the end of the third conference, but *will probably* continue to be disregarded by writers of military fiction.

When the Aerial War Vessel

has attained the value of the battleship for offensive or defensive purposes, and when battles must be conducted

in the heavens, navies will become aerial instead of marine. There may be some complications by the introduction of different improvements, but the wildest expectation will not make a defensive and offensive military or naval establishment unnecessary. These stories are visionary, exciting the public mind and furnishing opportunities for disappointment.

It would be impossible to refute the many stories that are circulated about the weakness of our navy and that of other nations. In the heat of argument many statements are made, frequently through ignorance, which border on the untruth. These are repeated with slight changes, until even the original statement is not recognized. In the last heated campaign in England, Lord Charles Beresford was quoted as saying that several of their latest battleships of the "Dreadnaught" type, only a short time in the service, are worthless, because they cannot stand in the water while their big guns are fired. I do not know what Lord Beresford may have actually said, and perhaps he does not favor the latest heavy gunships of the "Dreadnaught" type, or of the large size of the ships that are now building and are proposed, but I am sure that he did not state that "they could not stand in the water while the big guns are being fired." The stability of a ship is too great to be affected by the sudden shock of the firing of the guns, if able to resist the more powerful forces tending to capsize her. It would only be necessary for one to be aboard of a ship and see the large guns fired to know that the shock, which is, of course, considerable, in its effect upon the great bulk of 20,000 tons is very small. The same article states that the counterparts in the American navy have never been fired. We have none of the "Dreadnaught" type as yet in commission, or they would have been fired; there will be no hesitation on that score.

Many times radical changes take place in some details which are experiments, as, for example, substituting turbine engines for reciprocating engines. These have been tried in the merchant service on smaller vessels, and on the large trans-Atlantic steamers, with more or less success. England with her usual desire to be in the advance put this type of engine in one of the first "Dreadnaughts." It is rumored this was not a success, as the requirements of the propelling machinery on a man-of-war are very different from a merchant ship. At the same time changes were made, new inventions followed, and now the turbine engine is the equal if not the superior for men-of-war.

This would be a case where unkind critics would say that the ship was a failure and only good for the scrap heap. The height and width of armor belts, size of ports, height of freeboard, ammunition hoists, in fact the type of our vessels, have been severely criticised by the critics of our navy. Some of them may have been more or less true, but they were faults that were made in the earlier types of vessels, and have since been corrected; different experts have different opinions, and only by experience can complete knowledge be gained. It must be remembered in planning a battleship many questions have to be considered—speed, armor, armament and endurance—all of almost equal importance; all must be limited by the size of the ship and floating capacity, a compromise can only be made to get the best results. In order to carry sufficient armament or guns—the fighting elements—the armor of the ship can only be impenetrable at the vital parts. I repeat that our ships are the equal if not superior to the battleships of any nation that were built at the same time.

Finally, if *arbitration* for settling international disputes, upon principles of international law, of equity and of reason, *is preferable* to war, it would be the ideal solution of the question, but is it *in all cases practicable?* Although there is a certain active current at times in favor of courts of arbitration, there is no general disposition on the part of governments to accede to them except in cases of minor importance. Many minor subjects without doubt can be so referred and settled; this would save much time, money and diplomacy, as are disputes between individuals by a court of justice.

No question but that war is barbarous and cruel; at the same time nations have been formed, and some good has been accomplished.

As Civilization Advances,

war implements become more deadly, the preparation for defense more elaborate, and the power of battleships more nearly equal; all questions for dispute will be settled, *if possible*, by diplomatic negotiations.

These negotiations will, in my opinion, prevent difficulties to a much greater extent than will arbitration. There are some international disputes which in their very nature cannot be submitted to arbitration: those involving questions of national honor. We have many times been threatened with serious difficulties which perhaps in some cases arbitration has prevented; as in the case with England on the question of the Alabama claims, also the Venezuelan boundary; but could arbitration have prevented the Revolution, the War of 1812, or the Spanish War? In the last case the arbiter could have taken no account of the moral question; if referred to arbitration, doubtless the Spanish flag would still fly over Cuba.

The last Peace Conference at The Hague, which met in 1907, and sat for four months, has been frequently alluded to as one of the advanced steps towards arbitration for the settlement of all international difficulties. Forty-five different countries were represented at this conference, which embraced all of the large countries of the civilized world. What was the result of this conference? One of the most important subjects to be brought before it, "The Reduction of Expenditures on Armaments," was not even discussed, as before the conference assembled, inquiries developed that there was *no plan*, especially that regarding naval armament (which interested us particularly), upon which the nations could possibly agree. The only plan which seemed at all feasible, that of limiting the size of battleships, also met with no favor.

It seems as if the chances of peace by arbitration were remote, and until the desire for world-wide peace can find more favor with all nations, it is wise, in view of our many possible complications, that we build and maintain a first-class fleet as our most potent guarantee of peace. This was the opinion of Theodore Roosevelt, who had made a most careful study of international law, who understood the navy and its necessities, and while desiring peace for our country, did not wish to neglect this most powerful factor in preserving it.

Warships do not drive a foreign power into war with the United States. We do not aspire to be a bully, ready for a fight; but we must have other forces than our pens or weapons of peace for convincing both the strong and the weak that our policies must be considered and there is a limit to our forbearance.

The Call of the East

The Providence Convention of the Atlantic Deeper Waterways Association, and what it Means to Worcester and all of New England

By Hon. J. Hampton Moore,

Congressman from Pennsylvania and President of the Atlantic Deeper Waterways Association

IT is high time the people of New England gave heed to the internal improvements of the country. The West is booming and is rapidly entering into every field of manufacture with which New England is familiar. The West has built railroads largely with Eastern capital. It has demanded and has received transportation facilities both by rail and by water, and in the matter of waterways improvements the Middle West, particularly along the Mississippi Valley, has been steadily growing. Nearly half of the appropriations thus far made by the government for improved inland waterways have been spent upon the Mississippi River and its tributaries. The Rivers and Harbors Bill, just passed by the House, contemplates the expenditure of hundreds of millions to complete the Mississippi waterway system. What has been done for the East is not to be compared with the constant and insistent western tendency.

J. Hampton Moore

Who in New England stops to think that the population of the Middle West has far outstripped that of the old Colonial area and that the West to-day boasts of the greater proportion of native born citizens? Who, with progressive ideas in New England, fails to observe that the whole of the area from Maine to New York is served substantially by one railroad, while the single city of Seattle commands at least three railroad systems? There is no reason why the great western river should not be improved, but there is likewise no substantial reason why the progress of the East should be halted through failure to use properly its methods of transportation.

The Atlantic Deeper Waterways Association, realizing the bottled-up condition of New England, has been pleading for public attention for an inland chain of waterways from Cape Cod to Florida, that would open up competitive transportation and commercial and agricultural opportunities to thirty millions of people, whose capacity for production is limited to existing facilities. The Middle West would not be content with what we endure in the East.

At Providence, R. I., next autumn, the Atlantic Deeper Waterways Association will hold its third annual convention. It has secured Congressional authorization for a survey for inland waterways that will save hundreds of wrecks upon Cape Cod and consequent loss of life; that will reduce freight rates and facilitate shipments of coal and other raw materials, and that will help to inspire renewed business enterprise. No State along the Atlantic seaboard has a deeper interest in this problem than Massachusetts, and if the Worcester Magazine will present this suggestion to its readers there doubtless will be an increased attendance on the part of New England business men when the Providence convention is called to order.

Massachusetts' Action

The Massachusetts State Board of Trade has taken this matter up and has appointed a general committee and seven special committees to arrange for a meeting this month in Boston, at which the eastern business interests will be given a chance to express themselves on the subject. George F. Booth, ex-president of the Worcester Board of Trade, is a member of the general committee of arrangements for this meeting, and this Board has been asked to send five delegates to the conference when held.

Hon. Loyed E. Chamberlain of Brockton, president of the State Board of Trade, has prepared an exceedingly valuable and exhaustive report on this whole matter, showing its tremendous value to New England. In the course of this document he says:

In March last, Congress authorized a survey for the construction of a continuous waterway inland, where practicable, from Boston, Mass., to Long Island Sound; thence to New York Bay; thence across the State of New Jersey to a suitable point on Delaware River or Bay; thence to Chesapeake Bay; thence from Norfolk, Va., to the Sounds of North Carolina and Beaufort Inlet, N. C., for the purpose of ascertaining the cost of a channel, with a maximum depth of 25 feet, or such lesser depth, along any section of the said waterway as may be found to be sufficient for commercial, naval or military purposes.

The act also provided for the preparation of plans and estimate of cost, and the probable cost of acquiring any existing canals; $100,000 was appropriated for the work and a further sum of $50,000 for the expenses of a thorough examination of the subject of waterways here and in Europe by a water commission created by the act.

Under an order from the War Department, issued March 8, 1909, a board of officers of the Corps of Engineers was appointed to make the survey and report. Lieut.-col. Edward Burr, with headquarters in Boston, has charge of the route in Massachusetts.

A corporation has entered upon the preliminary construction of a canal from Buzzards Bay to Barnstable Bay, involving a cut of about eight miles. This is a private enterprise, and does not accomplish all that is desired by the Association, namely, a government-owned waterway free of tolls. This canal will effect a saving of 75 miles and the delays and dangers incident to making Cape Cod.

Another project is a cut from Boston Harbor to Narragansett Bay via Fore River, Brockton, Taunton and Taunton River to Mt. Hope Bay by Fall River. Another runs from Hingham Bay by the way of the coast via Taunton River to Mt. Hope. The former would be a lock canal overcoming an elevation of 130 feet; the latter about 15 miles longer, but a tide-level canal.

To carry out the real object of an inland waterway, a Rhode Island canal is being considered, passing back of Point Judith and entering the Sound at Watch Hill, with a length of 31 miles, all but about 5 miles of which being now flowed by tide-water. For in point of fact the stretch of open ocean navigation from Race Rock at the eastern end of Long Island Sound to the mouth of Buzzards Bay, a distance of about 60 miles in length, is the scene of more marine disasters with the accompanying loss of life and property than any like distance along the Atlantic Coast, barring Hatteras and the stretch from Nantucket Sound to Provincetown.

We are essentially a manufacturing community. Our logical capital, the inventive genius, and the intelligence and enterprise of our people have been so clearly demonstrated in gathering in the natural products of other sections and converting them into articles of utility that our place in the general economy of the nation has become recognized and fixed. We must have grain and flour from the Middle West; cheap fuel from Pennsylvania, West Virginia, Maryland and Ohio; iron ore from Minnesota; copper from Michigan; lumber from the South, from Canada and the Northwest; oil and oil products from Pennsylvania; and cotton from the southern belt. We must find markets for our woolen and cotton goods, boots and shoes, machinery and a long line of other manufactured products. New England must be brought near the grain, coal and iron fields. The whole country which wants our manufactured articles must be brought nearer to us.

GEORGE F. BOOTH

Member of the General Committee of Arrangements, State Board of Trade on Atlantic Deeper Waterways Convention

We have looked naturally to competition as a safety-valve against unjust rates, and have tried it in Massachusetts by seeking to develop our railroad facilities. We sank millions in the Hoosac Tunnel in an endeavor to open an independent line to the West. We chartered another line as a nucleus for a competing route to the South and West. We sold the former and allowed the latter to go into the hands of the Boston & Lowell, which became merged in the Fitchburg, then into the Boston & Maine. It is questionable if today there is even railroad competition in New England.

The alternative method of transportation is by water. Around Cape Cod must pass all water traffic between New York and ports to the south, and Boston and points north. From 30,000 to 40,000 vessels annually make the Cape.

For more than 200 years the desirability of some sort of a waterway across southeastern Massachusetts has been freely discussed, and numerous acts have been passed designed to accomplish that result. In all these projects, the primary consideration has been the humane effort to obviate the danger to life and property incident to navigation in its treacherous waters. Because of its fogs, narrow channels, adverse currents, shifting sands and contrary winds, it is as much dreaded by mariners as Cape Hatteras or the Banks of Newfoundland. Its average annual record of the loss of 30 lives, and property valued at $500,000, is reason sufficient for the construction of a canal, if no other object were apparent.

Another reason for activity along these lines in New England exists in the charges and handicap which this dangerous barrier imposes on our commerce, in high rate of insurance, cost of labor and delays, equal, it is claimed, to at least 10 per cent. on every ton passing north or south around the Cape. The transportation of 25,000,000 to 30,000,000 tons per annum gives an idea of the tremendous loss. The saving in distance and time is an important consideration, likewise the delays to shipping, growing in importance each year. The delays incident to the storms and fogs are a matter of serious concern. When it means a cost of from $20 to $25 a day for a captain to hold his vessel of 1000 tons in Vineyard Harbor or Provincetown, or west of Point Judith for days and sometimes for weeks, it becomes of vital consequence to him and to the commercial interests of Massachusetts. For these delays and for great loss of property, the consumer must pay. The distance from Point Judith to Boston by the usual inside route is 170 miles; a canal across Cape Cod would reduce the distance to 110 miles, while a cut from Mt. Hope Bay to Boston direct reduces the distance to 75 miles.

The movement to supplement the existing transportation service in the country by making a greater use of our undeveloped waterways is becoming more pronounced. It behooves New England to sit up and take notice of the fact. Certain conditions and facts must be obvious.

(1) The railroads at constantly increasing periods of industrial and commercial activity are unable to do the country's transporting business.

(2) Unless commerce can have an adequate channel, it must decline.

(3) It is doubtful if the railroads can catch up with the present normal demands. It is impossible so to increase their facilities as to meet the inevitable requirements of the future.

(4) In seeking for relief, the country is turning to its waterways and is determined to make them play their part in the development of our resources.

(5) Water is free and needs no right of way. The unit of water transportation, viz., the single vehicle—the steamer—can be constructed at much less cost than the vehicle of land transportation, which is not only engine and cars, but the entire equipment of the road, including right of way, roadbed, stations, and very expensive terminal facilities, many miles of

construction being necessary before the land vehicle is available.

(6) Water transportation is therefore cheaper than land.

(7) Though not utilized and though they have played little part in our industrial life, we have a river system better adapted to the needs of our country, when properly developed, than those of any other people.

(8) Besides the Great Lakes, with many characteristics of oceans, we have 25,000 miles of navigable rivers, and at least an equal amount which might be made so by improvement. We have also some 2500 miles of canals and over 2500 miles of sounds, bays and bayous readily connectable by canals for inner passageways paralleling the Atlantic coast.

(9) It is obvious that we must develop our waterways in a scientific manner with clearly defined plans at the outset, and must act in the interest of the larger number as against special and local interests where general merit is lacking. Our rivers must be dealt with as units, and to develop them means more than simply widening and deepening, but involves the securing of an even and regular flow throughout the year, the use of power and the many other incidents of a stream in a state of nature.

(10) The true relation between waterways and existing means of transportation must be considered, and the position which they are to occupy in the general economy of the service clearly defined. Hence legislation to operate is as necessary as legislation to construct.

This inland waterway project has an important bearing upon the future of Boston as a seaport. New York handles 47% of the foreign commerce of the country. Boston, while recently indicating a gratifying increase, fails to show a desired expanding commerce. Boston has a splendid harbor and should be the greatest foreign shipping port for the products of the West and Northwest. One hundred and eighty miles nearer European ports than its nearest competitor, its docks nearer the open sea than those of New York, and its water-front capable of greater and more scientific expansion, no physical reasons are presented why it should not outstrip its rival.

A dependable business is important to a thriving seaport. The transportation business is at its best uncertain in volume, and everything that contributes to make it steady and even is to be eagerly sought. The great liners must sail on stated days, hence we see, more especially in foreign ports, the establishment of smaller coastwise lines to supply and distribute the necessary cargoes. Steamers should not, after unloading in Boston, be compelled to go to other points for a return cargo, or sail from here with a load of sand or water for ballast. It is much more profitable to fill up with grain.

The widening and deepening of the Erie Canal, and the development of the intercoastal waterways south from New York, will make it more and more a point of departure and distribution. Extend that waterway to Boston by an inland route and there is no reason why it should not be on an equality with New York; there are many reasons why it could surpass it. Much of the railroad traffic centring at New York must be transferred to lighters to reach foreign vessels. Boston could secure much of this if the present elements of danger and delay to barges could be eliminated.

To this work Congress must address itself. But Congress will not act until the country insists, and the country will not insist until there is a thorough appreciation of conditions, and the effectiveness of the proposed remedy has been made apparent by study, investigation, and education universally carried on. It is creditable to our Board that we are enlisted in this work. It is unfortunate that others are not equally active. It is hoped the session of this Association, at Providence in 1910, will make manifest to New England that it needs this relief more than any other section.

The Business Situation Here

The industrial and mercantile situation in Worcester as the spring of 1910 opens is excellent, and gives promise of one of the best years in the history of the city. Building is active, particularly in the residential section, and while individual plants are not doing so much new work in this line as they did last year, there is one conspicuous exception in the gigantic job being done at Greendale in the construction of the new Bradley Car Works. This is the most important industrial development in the history of the Heart of the Commonwealth in decades. The city has certainly reason to congratulate itself that an industry of this size and with its earning capacity is being erected within its borders. When completed, this plant will be the largest car works in the world outside the car trust.

In addition to this substantial contribution to Worcester's material development, the Worcester Electric Light Company proposes to erect immediately its new power station on the recently acquired site at Curtis Pond. The building will be fireproof throughout, of steel, concrete and brick, and will contain three massive kilowatt steam turbine sets and 4800 horse-power boilers, the battery to have eight 600 horse-power units. When completed, the concern will have as modern an equipment as any electric light company boasts in New England, and will be in a position to furnish both light and power up to the public demand.

The industrial situation which has shown in some machinery lines a slight slackening, due possibly to the threat of anti-railroad legislation, is manifesting improvement again, and in the automobile industry and all the related lines business is booming, as the trite phrase has it.

The commercial outlook is also excellent. Bank clearings last month showed a gain of almost $3,000,000 over the corresponding month last year, or a gain of 44.1 per cent., and were actually 54.5 per cent. more than in February, 1906.

From the Field

The Sacramento, Cal., Chamber of Commerce is taking in new members at the rate of over fifty a week.

The Los Angeles Chamber of Commerce has let down the bars and is now admitting women to membership in the organization.

The Omaha, Neb., Commercial Club is working hard to bring new industries to that city, and has a number of good prospects.

The property of the Omaha Board of Trade, consisting of building and lot, originally costing about $100,000, is now paying dividends on $400,000.

The Poughkeepsie Chamber of Commerce has decided to incorporate a realty company capitalized at $50,000 for the purpose of building homes for workingmen in that city.

The Lowell Board of Trade has set the goal for new members at 750, and an active campaign is now on in that city to increase the membership to that number within five weeks.

The Geneva, N. Y., Chamber of Commerce favors a reduction in dues from $10 to $2 a year for the purpose of increasing the membership and allowing one vote for each $2 subscribed.

Antrim, N. H., is one of the latest converts to the board of trade idea, the first body of the kind in the history of the town having recently been organized with a paid membership of 100.

Des Moines, Ia., doesn't believe in hiding its light under a bushel, and the Commercial Club of that city will run two special excursion advertising trains over the state this spring. It will take nine days to cover the route mapped out.

The Springfield Board of Trade is making plans to boom that city as a fine place for holding conventions. The hotel facilities are first-class, and the completion of the new municipal auditorium will give the city a place for holding big gatherings.

From Death to Life

How Kingston, N. Y., did it Ten Days Ago is Told by the Energetic Secretary of its New Chamber of Commerce

By A. D. Pardee
Secretary Chamber of Commerce, Kingston, N. Y.

THIS is the story of an organization that was literally raised from the dead. In 1909 the Kingston, N. Y., Board of Trade did not have 150 members. The year before that it had 192. Dissolution had set in.

I want you to know something of my efforts in converting this dead organization into a live one since my return from the Rochester Convention of the National Association of Commercial Executives in October, 1909.

To begin with, I arranged for a rally of our members at the annual meeting held in January, at which time I had the aid of arousing new interest in our organization through the services of Mr. Roy S. Smith, the live wire of Elmira, N. Y., Chamber of Commerce. I succeeded in getting 125 members to attend this meeting, which resulted in the election of new officers and several new directors. I then followed this rally up by getting the directors to give consideration to the question of changing the name of the organization from the Kingston Board of Trade to the Chamber of Commerce of Kingston, N. Y., and to incorporate it. This met with the approval of our members and the change was made at a special meeting held Feb. 21st. At a meeting of the directors March 7th, I recommended a campaign for new members, which recommendation met with their hearty approval, and March 22 was selected as "Booster Day."

HELP BOOST KINGSTON

BY JOINING THE NEW, LIVE

CHAMBER OF COMMERCE

ON OR BEFORE

BOOSTER DAY

TUESDAY, MARCH 22

Civic Pride and a determination to make Kingston a more Prosperous and Progressive City should induce every public-spirited citizen to assist in starting the wheels of progress revolving with lightning rapidity in this Old Colonial Town: to help supplant inactivity with the hum of industry.

GIVE THE "BOOSTERS" YOUR AID!

HELP DEVELOP KINGSTON.

A MEMBERSHIP in the KINGSTON CHAMBER of COMMERCE is an emblem of public spirit and civic pride, and

It only costs 42 cents a month, or $5.00 a year.

"DO IT FOR KINGSTON" by joining now!

The Booster Poster

And here is the way we advertised it. We had printed and distributed throughout the city large yellow bill posters, printed in black and red, which were placed two weeks in advance of "Booster Day," and on the 19th of March we distributed 3000 hand bills throughout the residential section of the city. Permission was given us by the Public Service Corporation to place suitable posters in all of the cars, and to place large muslin signs on the outside, both front and rear. In addition to this publicity, the newspapers printed articles prepared by the Publicity Committee and myself, which articles appeared in one or all three daily papers for two weeks, and on the Saturday and Monday preceding "Booster Day" our merchants ran "Booster" ads in place of their regular business advertisements, and these "ads" were the talk of the town, they being very suggestive and to the point as regards waking up and working together for the development of Kingston.

When "Booster Day," March 22, arrived, two directors and three members of the organization were assigned to each of the wards, and these committees of five made a thorough canvass of their respective districts. The start was made by automobiles at nine o'clock from the City Hall, and at noon all the committees met and lunched at Hotel Ulster, where each committee reported to the chairman of the Membership Committee. In the afternoon the committees divided, and persons who had not yet joined, or who had refused to sign an application for the regular committee soliciting his ward, were solicited by their personal friends, which resulted in many new members being obtained, making a grand total of nearly 800 members.

We attribute this excellent showing to the interest and spirit possessed by our new directors, who went into the work with the determination to get 500 members by April 1. As the result of the efforts already made, the good people of our city are talking Chamber of Commerce in stores and shops, clubs, at church meetings, basketball games and in fact everywhere; and now that we have got this good start, we intend to map out a plan to advertise Kingston in a manner never undertaken by the old organization, and when we get through with this twentieth century campaign of advertising, we expect to be able to show by successful results what can be done when the spirit of "doing things" dominates and controls the acts of officers and directors of a commercial organization. We of course realize that we have natural advantages that will appeal to the average manufacturer, and in addition to this inducement, we intend to make our city more attractive to them by inducements of a special nature. There is no rubbing out the fact that we have got one of the best little cities in the United States, beautifully situated on the banks of the famous Hudson River.

Worcester's Telephone Bill

How it Compares with the Rates Charged in Other Cities—Rochester the Cheapest for Business and Indianapolis the Cheapest for Residence Phones

THE Travelers and Merchants Association of Baltimore, Md., has just completed a thorough investigation into the rates charged by the Bell Telephone Company in the leading cities of this country, and its findings ought to be very interesting and valuable to all telephone subscribers and the public generally.

They are particularly interesting to Worcester people, as an examination of them shows that the rates charged in this city compare favorably with those charged in any city in this country, with the possible exception of Indianapolis, Ind., which appears to be in a class by itself, and a favored one at that.

The cities from which facts and figures were obtained consisted of New York, Chicago, Philadelphia, Boston, Baltimore, San Francisco, Cincinnati, Pittsburg, New Orleans, Milwaukee, Washington, Newark, Jersey City, Providence; Memphis, Tenn.; Seattle; Trenton, N. J.; Detroit, Mich.; Indianapolis; Toledo; Columbus, O.; St. Joseph, Mo.; Rochester, N. Y.; Albany; Nashville, Tenn.; Spokane; Louisville, Tenn.; Cleveland; Kansas City, Mo., and Worcester.

The rates for unlimited service for business houses are lower in but eight of the leading cities of the country than they are in Worcester. Rochester, N. Y., where there is a large independent company located, has the lowest business rate for unlimited service of any city reported in this country, viz., $48.

The rates charged in Worcester for a business telephone unlimited service over a one-party line, as compared with eight cities approximating us in population, are as follows:

RATES FOR UNLIMITED SERVICE—BUSINESS TELEPHONE

Worcester pays for one party,	69
Indianapolis, Ind., pays for one party,	54
Kansas City, Mo., pays for one party,	60
Toledo, O., pays for one party,	54
Columbus, O., pays for one party,	54
St. Joseph, Mo., pays for one party,	60
Rochester, N. Y., pays for one party,	48
Trenton, N. J., pays for one party,	60
Des Moines, Iowa, pays for one party,	60

Of these cities Indianapolis, Kansas City and Rochester, N. Y., alone are larger than Worcester.

Other large cities that pay much more than Worcester are Cleveland, which pays $84 a year for this same service; Cincinnati, which pays $100; Chicago and Pittsburg, which pay $125, while Boston is mulcted to the tune of $162.

Providence has a fifteen-mile radius for its telephone service, in which it pays $120 a year for an unlimited one-party business telephone, and $100 a year for an unlimited one-party residence telephone.

The rates in Worcester for limited two-party business service compare favorably with those charged in other cities. Worcester subscribers pay for 720 calls $36, while the same service costs Bostonians $55 for twenty less calls.

Worcester enjoys a lower rate for a limited one-party business service than other much larger cities. For example, the rate charged here for 840 calls is but $42, while Washington, D. C., pays $48 for 800 calls; Pittsburg pays $64 for 800 calls, and Baltimore pays $70 for 800 calls.

The greatest variation of all comes in the rates for unlimited service for residence telephones, running from $18 a year for a two-party phone in Indianapolis to $60 in Philadelphia. Worcester is one of the few cities in the country where an attempt is made to serve six people on one circuit, the four-party line being the limit in every other city reporting. Spokane, Wash., gets four-party service for $24 against $25 charged here for a six-party line, and St. Joseph, Mo., enjoys an equally favorable rate. Below appear the rates charged for residence telephones in eleven of the leading cities of this country, all of them of about the same population as Worcester:

RATES FOR UNLIMITED SERVICE—RESIDENCE TELEPHONES

	One-party.	Two-party.
Indianapolis, Ind.,	$24.00	$18.00
Rochester, N. Y.,	30.00	24.00
Des Moines, Iowa,	30.00	
Trenton, N. J.,	30.00	24.00
St. Joseph, Mo.,	36.00	30.00
Spokane, Wash.,	36.00	30.00
Memphis, Tenn.,	36.00	
Worcester, Mass.,	42.00	33.00
Seattle, Wash.,	42.00	36.00
Detroit, Mich.,	42.01	35.96
Milwaukee, Wis.,	42.00	36.00

It would appear from this table that Worcester was paying for this particular service all that it ought, but an examination of all the tables submitted shows that the rate charged here for the popular two-party line is much less than in many other large towns. Chicago, for example, pays $48 a year for the same service, Philadelphia $56, and St. Louis, $60.

Now that the Bell Telephone has taken over the Western Union Telegraph, it is expected that the use of the telephone will be materially increased, and it is believed that with this increase, and the economies that can be practiced through the joint use of the same operating wires for both telephone and telegraph service, material reductions can ultimately be made in the cost of both services to the public.

In other words, with the telephone and telegraph companies both under one management, and the employees of both actuated by one common purpose, the use of both methods of communication will be increased and the cost of transmission for both materially decreased. No less an authority than President Vail has recently declared that the benefits and advantages from this complementary operation will come, but not all at once.

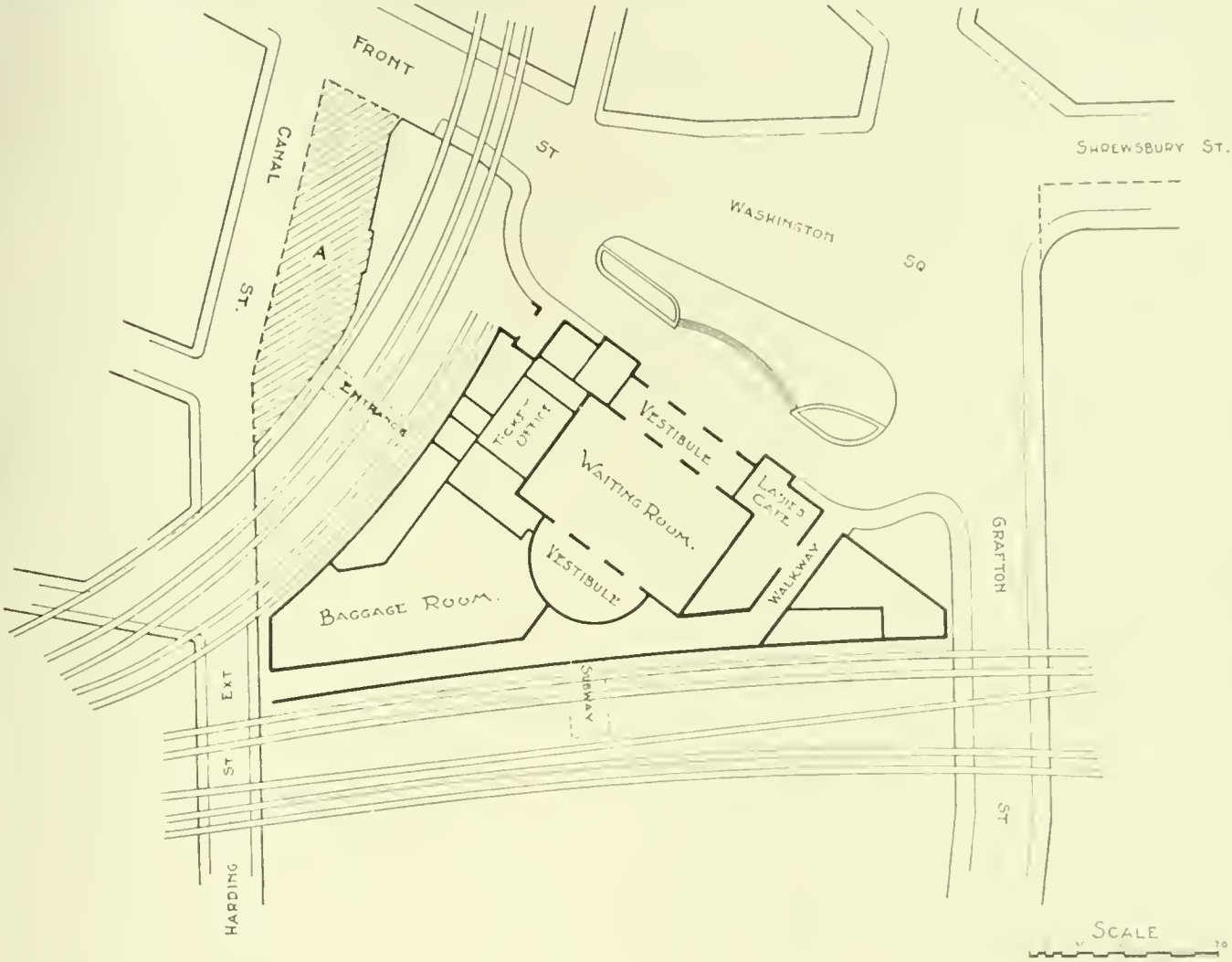
Worcester people who are such large users of the telephone and telegraph will be glad to see it come, and in the meantime may, perhaps, derive some satisfaction from a perusal and study of the figures given above.

The Union Station and its Approaches

A Ground Plan which Shows the Way in which the Tracks are Placed and the Streets will Appear when the Building is Completed

FOR the benefit of our readers, and to correct a vast amount of misinformation and misapprehension, the Worcester Magazine publishes herewith a ground plan of the new Union Station with its approaches.

Much has been said at different times in regard to the methods used by passengers in getting to and from trains at the station, and this diagram may assist in settling several mooted points in that connection.



As will be seen from the cut, the station is almost triangular in shape and the front, facing Washington Square, is the north end of the station.

On the east side of the station are located the tracks of the Boston & Albany Division Railroad, the two tracks nearest the station being the main line tracks. The next track east is the one used by the eastbound local, while the other two tracks are for the use of freight trains.

On the west side of the station, the two lines of track next the station are the lines of the New York, New Haven & Hartford Railroad, the next two tracks being those of the Boston & Maine Railroad, while the single line of track farthest west from the station is the freight track for the use of both the New York, New Haven & Hartford and the Boston & Maine Railroads.

To understand clearly the layout and the methods of entrance and exit, it should be borne in mind that these lines of track are located one story above the ground floor of the station and not on a level with it, as might appear from a glance at the cut.

To reach the Boston & Albany trains, passengers will pass from the station to the subway, under the tracks, to one of four flights of steps that lead from the ground floor subway to the track level. Two flights of steps are situated at either end of the subway so that passengers coming into Worcester from the east can take the steps between the west track and the station to the subway, while those coming into the station from the west will take those steps that are connected with the subway between the main line and the local line for eastbound trains.

This subway is lighted at all times with electricity and runs directly under the main line tracks of the Boston & Albany Railroad.

On the west side of the station, the shaded part of

the cut marked "A" is the Taylor property bought by the city and which is to be torn down to afford an approach to the station from Front Street.

The lines of track on this side of the station are set up on trestle work that runs parallel to the station at a height of one story above the street.

In this open space directly under the tracks of the Boston & Maine Railroad are situated two flights of steps, one from the north and the other from the south, running for a height of nine feet to a long platform that extends from the Boston & Maine freight tracks to the station.

Extending from this platform, that is guarded with a railing on each side, are four flights of steps leading to the track levels: two flights between the New York, New Haven & Hartford and the Boston & Maine passenger tracks, and the other two flights between the Boston & Maine passenger tracks and the Boston & Maine freight tracks.

A platform alongside the New York, New Haven & Hartford tracks on the east side receives passengers from the west, and a flight of steps leading from here to the platform, marked "entrance," allows passengers to reach the ground level of the station.

On this west side of the station it is expected that the railway company will run their cars to the station for the accommodation of passengers, and here also is provided accommodation for automobiles, hacks and baggage trucks.

The part of the plan marked "walkway" is for the use of those passengers who do not wish to pass through the station going or coming from a train. This walkway on the east side of the station is covered, and provided with outlets on Harding Street extension and Washington Square, allows passengers a chance to reach the Boston & Albany trains from any direction, without going through the station, by taking the walkway as far as the subway and thence to the track level.

A walkway not shown in the cut is also situated on the east side of the station, running from Harding Street extension as far as the part of the plan marked "entrance," and this walkway is on a gradual incline that brings it at the point marked "entrance" to the level of the platform entrance, under the railroad tracks.

Passengers who desire to use the Boston & Maine and the New York, New Haven & Hartford Railroads, without going through the station, can do so from either direction by coming to the street entrance of the platform marked "entrance," or from Harding Street, along the walkway to a point where the entrance platform joins with the covered walkway.

For those who buy tickets at the office and come through the vestibule from the waiting-room, a series of swinging doors gives connections with the walkway, near the subway on the east side, and with the platform entrance on the east side.

The plan shows, also, the approaches to the station from various points. It shows Shrewsbury Street as it will appear when widened, and shows Washington Square with the grass plot in front of the station and the spaces in it at either end for flower beds.

Elkhart's Experience

The city of Elkhart, Ind., promised a bonus of $20,000 to the Brunswick-Balke-Callender Company if it would locate there. After $17,000 had been raised the committee of the Elkhart Commercial Club having the matter in charge, signed a contract guaranteeing the balance, expecting to be able to go out and secure the remaining $3000 in subscriptions easily. Instead they now find themselves shy $1000, and are obliged to go down into their own pockets and make up the amount.

The Country Over

News of Commercial Organizations in Many States; What they are Aiming at and Accomplishing

Brookhaven, Miss., has fallen into line by organizing a board of trade.

The Commercial Club of Muscatine, Ia., sets apart Thursday afternoon of each week as ladies' day.

Baker City, Ore., gives evidence of its hustling proclivities by organizing a commercial club, under the guidance of the Citizens' League.

The Montpelier, Vt., Board of Trade, after an existence of fifteen months, has a working capital of $30,000.

John P. Casey has been appointed industrial and publicity commissioner of St. Catherines, Ont., his compensation to be gauged by a commission of one per cent. on the wage list of factories he induces to locate in that city.

The Salt Lake City Commercial Club has gained over 500 members since December, and now has a membership of over 1300.

The Waltham, Mass., Business Men's Association is contemplating the erection of a building for factory purposes, to induce new industries to locate in that city.

Pocatello, Idaho, is advertising itself as the "Gate City" by the distribution of 45,000 32-page booklets, describing its advantages, as well as issuing 10,000 smaller booklets and 15,000 colonist folders.

The Lowell Board of Trade recently added 47 new members at one meeting. The membership committee meets once a week and discusses plans for enrolling new members.

W. D. Vallette, for the past two years trade and traffic secretary of the Rochester, N. Y., Chamber of Commerce, resigned March 15.

The Merchants' Association of Brockton is getting busy on plans for Merchants' Week, June 1 to 8. There will be a floral parade, a workhorse parade with prizes, free automobile rides, and electrical illuminations and decorations on an elaborate scale.

One hundred and fifty members of the Tacoma, Wash., Commercial Club will swing around the circle in a special Pullman train in May. They will leave Tacoma about the first of the month and visit the principal cities of the State, with the object of fostering closer business and social relations between the different municipalities.

A movement is on foot in New York to form a State league of chambers of commerce, which it is hoped will result in uniformity of action on important questions, and be of great benefit to all concerned.

The question of forming a board of trade is being agitated by the business men and citizens of Palmer.

Camden, N. J., is making preparations for booming that city, and has planned a "Greater Camden Week" for that purpose.

The boosting fever has a firm hold on Hazleton, Pa., whose Board of Trade is hustling for all it is worth to emphasize the advantageous features of that city as a manufacturing and business centre.

Editorial Reflections

Worcester Represented in Western Rate Cases

Several conferences have been held in New York city in the last few months of representatives of the leading commercial organizations of the East to formulate plans to prevent any further discrimination against this part of the country by the railroads, with special reference to freight rates.

One such conference was held in the rooms of the Merchants' Association of New York, Nov. 22, 1909, at which those present, representing some eighteen different commercial organizations along the Atlantic seaboard and farther inland, listened with great interest to the report presented by Hon. Nathan Bijur of New York, on the Spokane rate case, so called, in which the Merchants' Association of New York and other allied bodies had intervened.

It was the sentiment of those present at that meeting and at all of the conferences held subsequently that the time had arrived when the commercial organizations of the East should act as a unit in resisting any enhancement of freight rates from this section, particularly in favor of the shippers of the Middle West. Indeed, it was felt on all sides that this whole matter of western rates ought to be taken up and dealt with in a thoroughgoing and systematic manner, in order that we might continue to enjoy the advantages as to freight rates that we now possess.

No better method of doing this seemed to suggest itself than through a personal interview with the presidents of the great trans-continental railroads by a specially appointed committee familiar with the entire situation and clothed with sufficient authority to represent the vast financial interests of the eastern section of the nation.

Nothing but good could come of such an interview, and with that idea in view the presidents of the Great Northern, the Northern Pacific, the Union Pacific and the Southern Pacific have been communicated with and have expressed a willingness to meet such a committee in conference, at which time the case for the East can be adequately and fully presented.

The Worcester Board of Trade has been identified with this movement practically from the start. And for this reason: Perhaps no city in the East is more vitally concerned in the matter of freight rates than this. Most cities have some water competition. This city is absolutely dependent on its railroads for its transportation facilities. Anything therefore that has a tendency to increase them ought to be resisted and will be resisted by this Board of Trade if it performs its true duty by its members and the city it represents. Acting on this principle the President of this Board, the Vice-president and many members of the Committee on Transportation and Railroads, have participated in the New York conferences, and all the officers of the Board have co-operated in the movement to bring about concerted action to prevent any further enhancement of the western rate.

Mr. Charles C. Hoyt of Boston, president of the New England Shoe & Leather Exchange, is Chairman of the Associated Eastern Business Organizations having this matter in charge, and he has asked the following gentlemen to act as the committee to confer with the railroad officials: Mr. Bernard J. Rothwell, president of the Boston Chamber of Commerce; Mr. Charles T. Tatman, president of the Worcester Board of Trade, Hon. Herman A. Metz, chairman Committee on Domestic Commerce of the Merchants' Association of New York; Hon. Charles A. Schieren, ex-mayor of Brooklyn, chairman of the Committee on Railroad Rates of the Chamber of Commerce of New York, and Mr. Finley Acker, president of the Philadelphia Chamber of Commerce.

The committee will meet the presidents of the four trans-continental lines at such time and place as they may appoint, to discuss the alleged discrimination of their lines against the East in favor of the Middle West, but the meeting will probably take place in New York city, and soon.

The questions involved mean thousands and hundreds of thousands of dollars to eastern shippers, and it is a high compliment to this Board and a deserved recognition of our importance as a shipping centre that Worcester is represented on this committee.

As was said in discussing this matter in the December issue of this Magazine: "What the East wants is to preserve the blanket rate from the present blanket territory into Spokane and other intermountain points. If Chicago and St. Louis manufacturers and merchants are to enjoy freight rates to the West lower than Worcester, Boston and New York enjoy, the shippers from these eastern cities will be handicapped to the extent of the local rate from the point of shipment to Chicago. This will be a tax upon eastern business men which will make it difficult for them to compete with the concerns of similar kind in the Middle West."

If the committee can preserve this rate it will not only perform a distinct public service, but it will demonstrate the superiority of organized resistance over individual protest in a manner most convincing. It is along such lines as these that the commercial organizations of this country are to do their great work in the future, and to prove in doing it their fitness or unfitness to live.

The Playground in Worcester

The past month has seen launched under the auspices of the Worcester Board of Trade a most far-reaching influence for good in this city, in the form of the Worcester Playground Association. Many weeks of earnest labor have been devoted to laying the foundation for this new movement by a zealous and painstaking committee, headed by Director Louis H. Buckley, and the result is seen in an organization broad enough to include all classes and all creeds, many nationalities and many religions being represented in the directorate. The officers include a president, four vice-presidents, secretary and treasurer, and twenty-seven directors, seven of whom are women. Some of the most prominent men and women in the city have consented to serve as directors, and at the meetings so far held the utmost interest and enthusiasm have been manifested.

Worcester has playgrounds a-plenty, and her public parks offer ideal spots for the relaxation and enjoyment of all her young people during the long, hot summer months. But they have never been utilized

as they should be, and with the exception of Crompton Park in South Worcester, but little has been done in the direction of supervised inspiring play upon them. As a result the boys and girls, even on the west side, have had to play in the streets and to cultivate a sixth sense while doing so, in order to avoid the onslaught of the automobile on one hand and the policeman on the other.

This is not a good arrangement for the children, the public or the authorities, and it is the hope of everybody connected with this movement that playgrounds properly equipped with apparatus for tennis, football, baseball and volleyball, for hurdling, pole vaulting, swinging and all the other multitudinous forms of athletic exercise will be promptly fitted up, and that when fitted up sympathetic supervisors will be appointed to take charge of the young people and direct them how to play intelligently and in reason.

There are now playgrounds thus supervised in 77 of the 100 leading cities of this country, Worcester being the 78th to enter this category; and in these 77 cities twenty millions of the nation's eighty millions reside.

The remaining 22 cities only have a population of about a million and a half, so that it is high time for Worcester to escape from the second class into the first class.

The number of playgrounds in these 77 cities is 710, and 67 of the 77 expended on them last year over two million dollars. Up to and including last year 60 of the 77 had spent in buying and fitting up these resorts no less than $31,000,000, principally from municipal funds.

In all, including cities and large towns of 5000 or over, there are now 336 cities in America boasting one or more playgrounds, and no community in all this list has ever abandoned the system after once adopting it. It is estimated that there are now in the United States, either under direct control of the municipality or privately endowed, more than 2000 playgrounds, employing more than 4500 people.

Commodore Bartlett

It is not easy of every life to say that it was characterized by a purpose. Men and women as a rule find themselves only after a severe and protracted struggle. Some, alas! never discover their life work. But Commodore Charles W. Bartlett, who has just passed out from amongst us—universally lamented—was one of those who from the very beginning pressed forward toward a definite goal—his country's good.

Determining in his very youth to enter the service of the republic, he gave to the nation the best that was in him from that moment until death closed his eyes in their last, long sleep.

It was this conclusiveness of character, this single-mindedness of purpose, this absolute sincerity of action that made Commodore Bartlett so delightful a companion and stimulating a friend.

Back of his sincerity and devotion to country there was a native gentle manliness that made intercourse with him peculiarly enjoyable. Let it be understood that in all this there was nothing weak or effeminate. On the contrary, quite otherwise. There was in him the inherent desire and determination to treat every man fairly. And he was not the sort of man who was always and forever looking for affronts. He was called in his naval career to meet many perplexing situations. He was frequently the custodian of most important state secrets. For many years he was thrown constantly into contact with members of the press, who knew that he was in possession of information of the greatest possible news value. During all those years no item of news received publication prematurely, and yet no man stood higher in the estimation of the lynx-eyed representatives of the art preservative of arts who make Washington their habitat and congressmen their prey.

While there was nothing about him that was neutral tinted, he was never offensively opinionated. He had positive convictions about the merits of the Sampson-Schley controversy, for example, but he held those opinions without sacrificing the friendship and esteem of either of those great captains.

He was impressed with the fact that it was his business to maintain the peace, and he felt sure that he could not impart peace to other souls when there was none in his own. A man of war and conversant with its spoils, he came actually to know that he who ruleth his own spirit is greater than he that taketh a city. To but few men is given the opportunity to make the literal comparison, but Commodore Bartlett, as he looked back on his career, derived far more satisfaction from his round of simple duties well performed, than in glorying over the wreck of a dying empire in whose dissolution he had played a historic part.

To some men death comes as a benediction; to some as a blow. It strikes down one man in the midst of unfulfilled duty. It adds to another the capstone in the arch of a completed life. It finds one man unprepared and another ready and waiting. It meets one man unexpectedly. It is greeted by another as an old friend. To some men it brings peace; to some rest; to some a grateful oblivion. To some men death seems to end all; to others it is but the open portal through which we pass to larger accomplishments, more important possibilities, greater endeavors, richer conquests.

Who that knew Commodore Bartlett can conceive of him in any other terms than the terms of life? That vigorous frame, that manly, courteous air, that active, forceful, commanding personality was not born to die. Those of us who saw him and heard him in that last famous speech of his in which he paid such a glowing tribute to the republic, and particularly to that branch of it which he adorned, can perhaps be pardoned for feeling rebellious that he has been taken and others of us less worthy and less useful have been left, but it is good to believe that in another and fairer clime he lives to perform new deeds of more exalted usefulness.

Few recent deaths in Worcester have struck keener blows at many hearts. In this fact Commodore Bartlett's life proves its success and its reason for being, for to live in the lives of those we love is not to die.

"This life is one, and in its warp and woof,
There runs a thread of gold that glitters fair,
And sometimes in the pattern shows most sweet
Where there are sombre colors. It is true
That we have wept. But oh! this thread is gold,
We would not have it tarnish; let us turn
Oft and look back upon the wondrous web,
And when it shineth sometimes we shall know,
That memory is possession."

Local March Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

The month closed with trade developments generally favorable, and showing a more settled condition than a few weeks ago. Favorable weather conditions stimulated more or less the early Easter trade, which was of fair volume.

More activity has developed in the machine tool line during the past few weeks, and manufacturers in this line report good orders, but are handicapped in obtaining sufficient skilled labor, which is reported scarce in all manufacturing lines.

Bank clearings for February showed a total of $8,605,742, compared with $5,970,095 in the corresponding month of last year, making a gain of 44.1 per cent., and a gain of 54.5 over the same month in 1906, when the clearings totalled $5,569,739.

Failures for the first quarter of this year were as follows:

Date.	No.	Liabilities.	Assets.
January,	11	$52,294.00	$12,789.00
February,	4	5,851.00	750.00
March,	6	121,348.00	3,053.00
	21	$179,493.00	$16,592.00

The corresponding period of 1909 showed a total of thirty failures, with liabilities of $137,986 and assets of $31,773, and in 1906 a total of twenty-seven, with liabilities of $204,189 and assets of $40,713.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

Albert Himottu, Weighing Scoop, No. 949,766.

A scoop fitted with an attachment to weigh the contents thereof, consisting of a handle supporting a frame in which rests the scoop, and a weighing device within the handle to register the weight within the scoop when a controlling lever is operated.

O. Tangring, Cable Connection, No. 949,921.

A connector for multiple strand electric cables, comprising a plurality of sleeves having tapered bores arranged to receive the ends of the cable, wedging rings having tapered peripheries arranged to receive the central strand of the cable and spread the outer strands against said tapered bores, the ends of the strands and rings projecting beyond the planes of the inner adjacent ends of said sleeves, a spacer of conductor material arranged between the ends of the cable and with which both the strands and the inner ends of said rings engage, and means disposed beyond the bore of the sleeves for drawing the two sleeves toward each other and at the same time forcing the ends of the strands and rings into close contact with said spacer.

Charles R. Sturdevant, Apparatus for Brazing or Welding Rail Bonds, No. 950,033.

An apparatus comprising a light car or vehicle arranged to be run on a track rail and provided with brazing or welding electrodes, a separate vehicle adapted to travel or to be set temporarily at one side of the track upon which the first named car or vehicle is supported, apparatus on said separate vehicle for supplying the electrodes with current, flexible conductors connecting the two vehicles, and a trolley connection between the separate vehicle and the overhead trolley wire, which supplies propulsion current for traffic on the track of which said track rail forms a part.

J. Ledoux and A. Ledoux, Double Door Bolt, No. 950,551.

A device to operate the top and bottom bolts of a door and the bolt fastening this door to another door and means whereby the other door may be unlocked without interfering with the top and bottom bolts, comprising an oscillatable cam having slots to receive pins on the bolts and a handle attached to the cam to operate the same to cause these pins to operate the bolts, one of the slots having a radial offset projecting toward the centre of the cam to permit the bolt locking the two doors to be withdrawn independently by a knob upon this bolt.

W. O. Wheeler, Steam Trap, No. 950,787.

A steam trap comprising a shell or case, having opposite admission and discharge openings, said shell or case having a partition transverse to said openings, dividing the interior of said shell or case, with the pressure upon the discharge side of said partition arranged to be less than the pressure upon the admission side, said partition provided with passages for communication in different horizontal planes, but with one end of each passage arranged below the plane of said discharge opening, whereby said passages will be sealed successively by the water of condensation in said shell or case.

The President and the Railroad Men

The visit of President Taft to Worcester and to his old home in Millbury, under the auspices of the Brotherhood of Railroad Trainmen, proved to be as great a success as the most ardent well-wisher of the chief executive and the railroad men could wish. The Board of Trade co-operated in the effort to secure the presence of the President in the Heart of the Commonwealth on this occasion, and in every way in which it was possible it assisted the tireless committees having the arduous duties of the great convention in charge.

It was a gigantic undertaking to bring to Worcester so many thousands of the men who are identified with our great transportation interests, and the Worcester trainmen deserve hearty congratulations on the success of an undertaking that seemed at first blush so audacious.

We trust that the visitors carried away with them pleasant recollections of their brief stay, and we feel sure that the city will not soon forget their numbers, their courtesy and their evident intelligence. The visit cannot fail to be of benefit to both, for the railroad men gained a new and better idea of us, and we certainly were glad to avail ourselves of the opportunity to obtain a better understanding of them, their character and their problems. The meeting came at a most opportune time in the industrial situation and its results promise to be far reaching for good.

Prizes aggregating nearly $400 in value were recently awarded by the Los Angeles Chamber of Commerce for the best examples of amateur photography as a method of advertising southern California, and 375 pictures of different subjects were submitted to the committee having the matter in charge.

Worcester Quotations

Furnished by Thompson, Towle & Co., Worcester, Mass.

March 21, 1910.

BANKS.

	Bid	Asked
Mechanics National Bank	150	.....
Merchants National Bank	170	.....
Worcester National Bank	210	.....
Worcester Trust Company	325	.....

RAILROAD STOCKS.

Boston & Albany	228½	last sale
Boston & Maine common	149	last sale
Boston & Worcester Elec. common	8	10½
Boston & Worcester Elec. pfd	44	46
Fitchburg preferred	150	last sale
New England Inv. & Sec. pfd	97	98
New York, New Haven & Hartford	158½	last sale
Norwich & Worcester	212	last sale
Providence & Worcester	270	last sale
Worcester, Nashua & Rochester	145	last sale
Worcester Railways & Investment	75	80

INDUSTRIAL STOCKS.

Crompton & Knowles pfd	147½	.....
Denholm & McKay common	200	.....
Denholm & McKay pfd	101	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd	115½	118
Royal Worcester Corset Co.	140	.....
United States Envelope common	50	52
United States Envelope pfd	114	116
Worcester Gas Light	270	.....
Worcester Electric Light	.....	290
Wright Wire Company common	102	.....
Wright Wire Company pfd	110	115

BONDS.

Amer. Writing Paper 1st 5's	89½	last sale
Boston & Worc. St. Ry. 1st 4½'s	98½	100
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles deb. 6's	5¼	last's
Marlboro & Westboro St. Ry. 1st 5's	.....	98
Norcross Brothers 1st 6's	97½	100
United States Envelope 1st 5's	101	102
Worcester Cons. St. Ry. 1st 4½'s	94½	.....
Worcester & Marlboro St. Ry. 1st 5's	.....	90
Worcester & Southbridge St. Ry. 1st 4½'s	90	92

Current Events

Personal and General

Feb. 18. Fire originating in raw material starts the sprinkler system, causing a damage of $3000 at the Ætna Hosiery Co.

22. Worcester Builders' Exchange annual dinner addressed by John Kirby, Jr., of Dayton, O., president of the National Association of Manufacturers.

23. Winthrop Hammond, for five years in the clothing business, retires.

25. Chairman Geo. W. Cook of the Worcester County Commissioners appears before the Committee on Counties, in Boston, and asks leave to raise $300,000 by taxes.

28. Thomas F. O'Flynn, B.S., principal of the Ledge Street school, completes a history of Worcester designed especially for use in the graded schools.

Worcester Board of Trade holds an open meeting, at which Hon. Robert Luce explains the arbitration bill now before the State Legislature.

United States Senator Joseph W. Bailey of Texas accepts invitation of the Worcester Board of Trade to be present at and address the annual banquet of the Board April 19th.

March 1. Worcester County Mechanics Association holds annual banquet, with addresses by Mayor James Logan, Associate Justice A. P. Ragg of the Supreme Court, President Milton P. Higgins of the Worcester Trade School, Paul B. Morgan and Rev. Dr. Archibald McCullagh, all emphasizing the necessity of training boys for mechanical trades.

Drs. John K. Warren and J. Marcus Barton tendered a complimentary banquet by the Homeopathic Physicians' Association of Massachusetts. Both presented with loving cups.

Worcester reservoirs gain 349,000,000 gallons in twenty-four hours, making a total in storage of 1,945,000,000 gallons.

5. Worcester Branch of the National Metal Trades Association holds annual banquet and election of officers, Robert Wuerst, of Cincinnati, commissioner of the Metal Trades Association, speaker. The following officers elected: President, Albert E. Newton; Vice-president, John W. Higgins; Treasurer, A. W. Brannan.

7. Brierly-Lombard Company purchase entire plant, including machinery and good-will, of the Worcester Textile Machinery Company, and move same to Stafford Street plant.

8. Rees & Rees, cleansers and dyers, open offices in Worcester in connection with New York, Boston and Philadelphia.

Four branches of the Artisans Canadiens Francais, in Worcester, take action supporting movement to secure second-class postal rates for fraternal publications carrying commercial advertising.

Members of the Massachusetts Branch, Order of Kokoal, have annual banquet in Worcester, with Charles E. Lester of Philadelphia as guest.

Worcester Merchants' Association meets and admits the Daniels Cornell Company and the Coes Wrench Company to membership.

9. Osgood Bradley Car Company signs a five-year contract with the Connecticut River Transmission Company for 900 kilowatts electric power, equal to about 1200 horse power.

Hygenia Brush Company of Worcester, incorporated under Massachusetts laws with a capital of $99,000, par value of shares $10. F. W. Mark president and treasurer.

W. L. Browne Electric Company of Worcester incorporated with $8000 capital. W. L. Browne president and treasurer.

Worcester Home for Consumptives Association, pioneer organization of its kind in this country, holds annual meeting and elects Dr. Carl Crisand president.

11. Worcester real estate dealers meet at the rooms of the Worcester Board of Trade and take the necessary steps toward organizing real estate exchange.

12. Reports of the fifty largest post-offices for February show Worcester to have made a 12.43% gain in the amount of business transacted.

13. Power passes through Greendale transformer station of the Connecticut River Transmission Company for the first time, station having been rebuilt since it was destroyed by fire two months ago.

14. Announcement made that Curtis Mfg. Company, manufacturers of woolens and thibets, will close their plant April 13, the buildings and land having been sold to the Worcester Electric Light Company.

15. Announcement made that the management of the Worcester Consolidated Street Railway Company will expend $10,000 on repairs and improvements at the Fremont Street power-house.

17. At mass meeting called by special committee of the Worcester Board of Trade, playground association formed.

18. Worcester Agricultural Society purchases 32,000 square feet of land adjacent to the entrance to its park in Greendale, making the entrance nearly 200 feet wide.

Ninety-six graduates of the Worcester Evening High School, class of 1910, receive diplomas, after an address by Hon. Joseph Walker.

Representatives of various improvement societies in Worcester meet at Board of Trade and take steps toward forming central organization.

20. Pilgrim Congregational Church celebrates twenty-fifth anniversary.

21. Otis D. Arnold, of the firm of Barrett, Snow & Arnold, general agents of the State Mutual Life Assurance Association, leaves the partnership to engage as a general agent independently.

City Hall

Feb. 18. City Engineer Frederick A. McClure prepares plans and estimates for the widening of Harding Street, at an estimated cost of $78,631.50.

City Treasurer DeWitt Clinton awards loan of $100,000 to Bond & Goodwin of Boston. Loan to mature October 14th; bid 3.54%.

21. City Council meets and adopts order for a six-room addition to Ledge Street school, to cost $50,000.

23. Sub-committee on Kindergartens of School Committee recommends an increase of $25 in the salaries of twenty-five kindergarten teachers.

Mayor James Logan orders two automobiles for use in the Fire Department, one a chief's surrey, a Thomas Flyer design, to carry the chief, three men, and light equipment; the other a heavier car, of Pope Hartford design, to be equipped with two 3 gallon and two 6-gallon chemical tanks, 1000 feet of 2½-inch hose and six men with light equipment. Water, street and sewer departments to have cars as soon as design can be selected.

Chairman Thomas Horre of the Board of Assessors receives announcement from the State Commissioner of Taxes that Worcester's share of the corporation tax will be $32,000.

25. Sub-committee on Teachers of the School Committee votes to recommend an increase of maximum and minimum salaries of all school principals, except those of two room school houses, to receive $50 more for the maximum.

28. Mayor James Logan signs transfer of land to the city turning Jackson Street northward, and allowing the railroad contractors to place bridge abutments for the elimination of grade crossings.

Water Commissioner Batchelder signs contract for a Buick touring car for the use of his department. This is the second department car purchased under the recent order of the City Council.

March 1. School Committee meets and provides for the appointment of two additional truant officers and one woman as supervisor of attendance.

7. City Council meets and adopts loan orders for the widening of Shrewsbury and Canal Streets and authorizes twenty year trolley express franchise.

Mayor James Logan names and the City Council confirms the following as the liquor license commissioners for the year 1910: Reginald Washburn, W. Levi Bousquet and James F. Carberry.

11. City Treasurer DeWitt Clinton awards $220,000 of the city of Worcester 4% ten year bonds, for street construction, to Estabrook & Company, of Boston, at $103.35; a basis of 3.59%.

17. Building permits issued in February amount to $196,423.

Mayor James Logan awards contract for 3000 feet of 2½-inch water hose, for the Fire Department, at a cost of $2400, to the Multiple Woven Hose & Rubber Company of Worcester, securing a thirty-six months' guarantee against imperfection.

Industrial

Feb. 21. Announcement made that Scoville & Wheeler, contractors and builders, have dissolved partnership formed in 1898. Mr. Wheeler will continue in the business, with offices at 314 Main Street.

22. O. W. Norcross Company of Worcester complete addition to the roof of the treasury building in Washington. The contract was for $40,000.

March 2. Pierce & Rice Oil Company buy factory formerly occupied by the Howe Paint & Color Company. Plant consists of four-story wooden building with additions, and about 26,737 square feet of land.

7. Fiske-Carter Construction Company receive contract for construction of an addition to the West End thread mills in Millbury, of brick, 48 by 63, one story, with tar and gravel roof.

14. Bernard Isenberg announces that he will build four apartment houses on Newbury and Pleasant Streets, with eighty suites of three and four rooms, making a total investment of $150,000.

Norcross Brothers Company secure contract to build addition to the plant of the Brown & Sharpe Company of Providence. Addition to be of brick and concrete construction, five stories, 45 by 80 feet, at a cost of $100,000.

15. Worcester Paving Company awarded contract by Boston & Maine Railroad to pave Rollstone Street in Fitchburg, at an estimated cost of $15,000.

19. Deeds passed between the city and R. F. Taylor for $95,000 real estate, to be used in the widening of Canal Street.

Ballard estate, comprising twenty-six acres, purchased for development by Worcester Land & Investment Company.

Plans drawn for an addition to the Greendale plant of the Norton Company, of brick and steel, 104 by 90 feet, three stories, to cost $25,000.

Announcement made that the Clatlin Coal Company and the Sumner Coal Company will unite after April 1st, with a capitalization of $125,000.

Necrology

Feb. 21. Nettie Albertina (Cleveland), wife of Roland Finley of 350 West Boylston Street.

24. Hon. Henry L. Parker of 1022 Main Street dies of heart disease, aged 77 years 4 months and 17 days. Mr. Parker was the oldest practicing member of the Worcester County Bar Association.

25. Daniel Rourke of 12 Lagrange Street dies of double pneumonia, aged 83 years. Mr. Rourke was the oldest member of the Father Mathew Temperance Association society.

Asia Ricker of 217 West Boylston Street dies of bronchopneumonia, aged 81 years 3 months and 25 days. Mr. Ricker was the oldest member of the Worcester Grange.

27. George E. Merrill of 17 Beechmont Street dies of heart disease, aged 71 years 9 months and 4 days. Mr. Merrill was for thirty five years cashier of the Mechanics National Bank.

March 1. Mary Cowen, widow of William A. Richardson of 921 Main Street, dies of Bright's and heart disease, aged 73 years 7 months and 11 days. Since the death of her husband Mrs. Richardson had been the heaviest stockholder in the Harrington-Richardson Arms Company.

Mary Jane (Ingham) Hamilton, widow of Amasa Strans, dies at the Home for the Aged, aged 85 years 8 months and 26 days.

2. Albert Edward Smith of 10 Regent Street dies of heart disease, aged 65 years 4 months and 20 days. Mr. Smith was well known throughout New England as a manufacturer of woolens.

7. Charles Cummings of Nashua, N. H., aged 28 years, crushed between cars on the dummy line at the works of the Bradley Car Company.

8. George William Allen, aged 65 years 1 month and 19 days, dies of apoplexy at the home of his son in Summit, N. J. Mr. Allen was the organizer and president of the Allen-Higgins Wall Paper Company of this city.

Cephas N. Walker of 46 Merrick Street dies of heart disease, aged 65 years 9 months and 5 days. Mr. Walker was formerly license commissioner, member of the City Council and commander of Geo. H. Ward Post 10, G. A. R.

11. Joseph Sargent, in Boston. Mr. Sargent was formerly engaged in the manufacture of carpets in the Pakachoag Mills, now a part of the Whittall Carpet Mills of Worcester.

16. Sylvanus G. Bullock of 6 Mason Street dies of congestion of the lungs, heart disease and jaundice. Mr. Bullock was a member of the police force and a veteran of the Civil War.

17. Commodore Charles Ward Bartlett, U.S.N., retired, at the home of his son, 56 Cedar Street, of acute bronchitis, aged 59 years 7 months and 6 days.

A Buffalo Prayer

For our comfortable living, for our fair surroundings, for our bread without the salt of charity, for our many blessings which the poor must lack, we give hearty thanks; and we resolve that from what store we have, a little more than we can comfortably afford shall be given to those servants of the poor who seek to cheer forlorn homes, to lift up weary lives, to open the path of opportunity, to remove old evils, and to cure the plague of poverty at its very sources. And this is done in the hope and faith that Buffalo will thus become a fairer and better home for all alike, and that virtue, courage, and peace will increase visibly among us and bless our city among all cities, forevermore. Amen.—*By Frederic Almy, secretary Buffalo Charity Organization Society.*

Here and There

Aidalia, Ga., has a chamber of commerce organized last month.

As an evidence of increased interest in municipal affairs in different sections of the country, many new civic organizations are being formed. Greensboro, N. C., is one of the latest recruits, starting off with a chamber of commerce of several hundred members.

Thorndike DeLand, formerly assistant secretary of the Boston, Mass., Chamber of Commerce, has been elected secretary of the Chamber of Commerce, Denver, Colo.

A unique method was lately adopted by the Oakland, Cal., Chamber of Commerce for advertising that locality. One hundred thousand postcards, setting forth the advantages of Alameda County, in which Oakland is situated, were sold by that organization in one day.

WORCESTER BOARD OF TRADE
11 FOSTER STREET
WORCESTER MASSACHUSETTS
EACH FOR ALL ALL FOR EACH
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

FRANK S. BLANCHARD, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
CLARENCE W. HOBBS, JOHN J. POWER, HERBERT H. FAIRBANKS,
JOHN W. HIGGINS, EDWARD J. CROSS, WILLIAM WOODWARD,
WINTHROP HAMMOND, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
WILLIAM FORSBERG, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, WILLIAM H. SANFORD. *Auditor*, H. WARD BATES.

Membership Committee.

E. BRUCE DUNN, MARK F. COSGROVE, GUSTAF A. BERG,
BENJAMIN B. SNOW, HARTLEY W. BARTLETT.

Chairmen of Standing Committees.

Advisory: RUFUS B. FOWLER.
Arbitration: CLARENCE W. HOBBS.
Building Laws: EDWARD J. CROSS.
Education: JOHN W. HIGGINS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: WILLIAM FORSBERG.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: ARTHUR C. COMINS.
Mercantile Affairs: WINTHROP HAMMOND.
Municipal Affairs: CHARLES L. GATES
New Enterprises: WILLIAM WOODWARD.
Publication: GEORGE F. BOOTH.
Public Health: ARTHUR O. YOUNG.
Statistics and Information: MARCUS L. FOSTER.
Taxation: HERBERT H. FAIRBANKS.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

The Work of the Board

Matters of Importance to Worcester People Acted upon at the March Meeting of the Directors

At the meeting of the Directors of the Worcester Board of Trade, held Thursday, March 10, action was taken on a number of matters of more than passing interest to the city of Worcester.

Ever since it became apparent that the elimination of the grade crossings at South Worcester was going to do away with the station at that point, there has been a feeling of dissatisfaction among the residents of that end of the city who have so long enjoyed the privileges this station afforded.

Retaining South Worcester Station

The matter of its retention was brought to the notice of this Board some time ago, and was referred to the Committee on Transportation and Railroads, who made a thorough investigation of the subject. Two things were learned: First, that the decree of the Superior Court, under which the western crossings are being abolished, did not provide for a station at that point, and second that the revenue from the sale of tickets at the station there located has been so small as to make the desirability of continuing it unattractive to the railroads themselves. However, in order to focus public sentiment one way or the other, the committee recommended and the Board voted to suggest to the residents of that section of the city that they petition the Boston & Albany management for the erection of a new station at that point to take the place of the one that has been demolished.

Better Train Service

The committee also recommended that the Board urge better train service between Boston and New York, via Worcester and Springfield, over the Boston & Albany and New York, New Haven & Hartford Railroads, and to ask the Boston Chamber of Commerce, the Framingham Board of Trade, and the Springfield Board of Trade to co-operate in securing a twelve o'clock limited train out of Boston over these two roads.

The Secretary, in compliance with this vote, has communicated with all three organizations, with the result that the Boston body reports itself in favor of the innovation, and the Springfield body is also agreeably disposed, but is of the opinion that such a train cannot be arranged for at this time. The matter is still in abeyance, and the members of the Board will be informed when there are any new developments.

The Carload Rate for Excess Freight

The matter of freight rates on the excess of carload lots is one that greatly interests all machinery shippers. Many of the cars furnished them will only hold 24,000 pounds, and frequently they have in excess of 36,000 pounds to make at one shipment. The rate on all over 24,000 pounds shipped in this "trailer" has been computed at a material advance over the carload rate, notwithstanding the fact that it was a part of one shipment, and the shipper himself would have rejoiced to get a car large enough to contain the entire shipment unbroken. All machinery shippers consider this rule of the carrying agencies a hardship and a united effort is being made at this time, under the leadership of D. O. Ives, manager of the New England Transportation Bureau, to secure from the Classification Committee, so called, a modification of Rule 27, as it is known, so that shipments of machinery in excess of carload lots now subject to Rule 27 may not be subject to Rule 27, but may be subject to Rule 5-C, except that part carload in excess of full carload shall be subject to a minimum charge of 12,000 pounds at carload rates.

This was the action recommended by the committee, and this was the action taken by the directors.

The directors, on recommendation of the committee, also adopted this resolution:

Anti-railroad Legislation

"Whereas, all agitation against the railroads of this country is calculated to have an injurious effect on every line of industry, therefore, be it

"Resolved, that it is the sentiment of the manufacturing interests of this city that our Congressmen be requested to look into the matter very carefully when bills adverse to the railroads are presented for their consideration, business being affected by their loss of purchasing power."

For Civic Improvement

A communication was read from Prof. Frank B. Williams of Clark College, asking the Directors to appoint two members to sit with a joint committee from the several civic improvement societies of the city for the purpose of discussing the advisability of forming a central organization, whose sole business shall be the investigation of civic problems and recommending action thereon. President Tatman and Mr. Charles L. Gates, chairman of the Committee on Municipal Affairs, were appointed as such committee.

Capt. Carden's European Trip

A communication was read from Mr. J. Russel Marble, a former director, enclosing a letter from Capt. G. L. Carden, U. S. R. C. S., with reference to a trip abroad

he proposes making this year, and extending an invitation to Mr. Marble to accompany him. Inasmuch as Mr. Marble cannot go, and inasmuch as Captain Carden purposes to visit several prominent European plants, he felt that some Worcester manufacturer might be glad if the necessary arrangements could be made with Captain Carden to take his place. No director present at the meeting could go, but it was the universal wish of all present that some representative of the industrial life of this city might accompany Captain Carden, if possible, on this trip.

The Hartford Peace Congress

A letter was received from the New England Arbitration and Peace Congress inviting the Board to send a delegate to its convention to be held at Hartford May 8-11, and the selection of this representative was left with the President.

Luce Bill Endorsed

The Committee on Arbitration, to whom was referred House Bill No. 477, the Luce Bill, so called, a law for the investigation of industrial disputes reported, recommending that the Board endorse the bill, and it was so voted.

Present Franchise Tax Approved

The Committee on Taxation, to whom was referred the communication from the Lowell Board of Trade, embracing a bill introduced into the Legislature by Representative E. B. Harlow of that city, providing for the distribution of the corporation franchise tax in the town or city where it is paid, recommended that no change be made in the existing law which divides the sum between the city and the State. The directors concurred in the recommendation.

Steamboat Companies Protest

A communication from Chauncy G. Whiton of New Bedford, with reference to the application of the interstate commerce law to coastwise vessels doing a port-to-port traffic, and protesting against the same, was referred to the Committee on Transportation.

The Better Farming Specials

It was voted that the Secretary represent the Board on the "better farming" specials to be conducted by the Massachusetts Agricultural College through this section, along the lines of both the Boston & Albany, and New England Investment & Securities Company's roads. The trains over the steam roads ran at the very beginning of this month, and were well patronized. The trolley specials will run about the middle of the month.

It is the hope of everybody connected with this wise and timely movement that, as a result of these trains, the farmers of New England, and of this section in particular, may be inspired to do more intensive agriculture, and to use scientifically tested and selected seed instead of that which they have been accustomed to plant, much of which, it is claimed, never germinates.

This is but one of the numerous activities of a new and momentous nature which are now being taken up, not only by the Worcester Board of Trade, but by all the leading commercial organizations of the country.

There being no further business, the Board adjourned.

How it Works in Steubenville

Steubenville, O., a little city of 23,000 inhabitants, has a live Chamber of Commerce and an energetic secretary in the person of Mr. A. D. MacMillan, a son of Rev. Peter MacMillan, formerly pastor of Hope Congregational Church, this city. Mr. MacMillan is another Worcester boy who, going direct from Dartmouth to Ohio, has made good in his chosen vocation, and has already proven a valiant worker in the ranks of the commercial executives in the Middle West.

At the last meeting of the Steubenville Chamber of Commerce, held March 30, he sent out to the members the following letter, showing that he has grasped at least one of the fundamentals of a secretary's work, viz., the appeal to local pride:

Dear Sir: I wonder if we fully realize that as a manufacturing place we have got a city to be proud of. I happen to have a pamphlet from Dallas, Texas, on my desk, and give some statements from it to compare with like items recently collected here:

	Dallas	Steubenville
Population,	105,000	23,000
Number of industries,	518	22
Capital invested,	$19,048,870	$12,485,000
Total value annual product,	$41,368,615	$14,353,300
No. of employees,	6,951	5,576
Annual pay roll,	$5,169,795	$3,776,430

In a great many other ways, however, we have simply been treading water. The necessary improvements cannot come all at once, but with steady, concerted action and actual work, we can gradually accomplish them.

At the monthly meeting of the Chamber of Commerce, this Thursday evening, in the Council Chamber, the Municipal Affairs Committee will submit a plan for taking initial steps towards securing filtered water; the Legislative Committee will have some matters to submit of interest to all business men and employers; the movement to further restrict peddlers in the city should be supported, and the revised constitution will be presented for adoption. Several other matters will also be brought up. Be there at 7.45.

One other matter. If you have an awning that extends over the sidewalk, this is the time to see that its lowest portion is at least seven feet above the sidewalk, the legal height. It is exceedingly disagreeable to have a low awning brush against you or oblige you to stoop under it, and the public will appreciate it greatly if you will see that your awning is sufficiently high.

Respectfully yours,

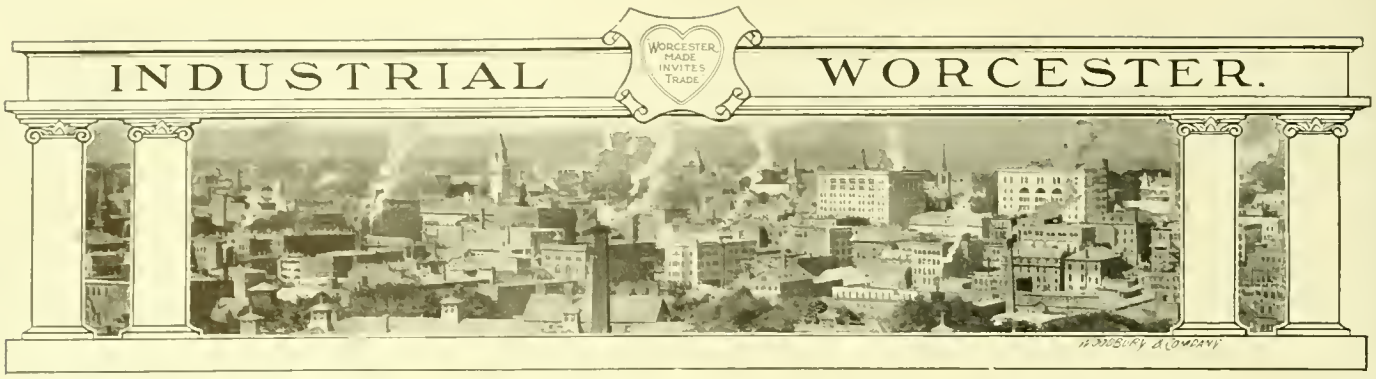
A. D. MacMillan,
Secretary.

The Truth About Rochester

The general public had been led to believe that in Rochester, N. Y., of all places they had pure milk, but if Dr. G. W. Goler of that city is to be believed, Rochester is no better off in this regard than the rest of the country.

Dr. G. W. Goler, the health officer of that city, in a recent article in the Post Express declared:

There are excellent laws against the sale of tuberculous milk in some few sections of the country. In most sections there are lax laws, or no laws at all. Rochester has no laws to protect its babies against tuberculous milk.



The Bradley Car Works

The transformation of fifty-three and one-half acres of virgin land to a thriving manufacturing centre within a space of six months is the accomplishment of the Osgood Bradley Car Company at the new site of its new car manufacturing industry, Greendale.

Where six months ago was a wilderness of grass, underbrush and woods, to-day stand thirteen buildings, with others in process of erection. Ground for the factory site was broken October 12, 1909, and the work has progressed with great rapidity since.

To meet the needs of the plant a new grade was established, necessitating the grading of between 70,000 and 80,000 cubic yards of dirt, while the hollows have been filled up by the use of 50,000 cubic yards of additional dirt bought from the Boston & Maine Railroad and hauled to the factory site by the railroad company at the rate of 900 to 1200 cubic yards daily.

On one of these low levels brought to grade a steel factory plant 90 x 280 x 40 has been erected, the order for the steel for this structure being placed March 1. This building will be ready for occupancy the last of this month.

The immense factory site of the Bradley Car Company dwarfs the old quarters of the company into insignificance, and the many buildings, each housing an industry in itself, are conveniently arranged to accomplish the greatest amount of work with the least possible delay.

The main building, covering an area almost half the size of City Hall Park, and equalling in extent the site of the old Union Station, train shed and all, gives one some idea of the magnitude of this modern and up-to-date plant, and emphasizes the fact that this is the age of big things.

This main building is divided into three bays, known as the north, centre, and south. The centre bay is 100 x 420 x 58 feet, and steam railroad cars are erected here, the cars being built crosswise of the bay on huge saddle bolsters. When this stage of the work is completed the cars are lifted bodily by a fifty-ton traveling crane over the tops of other cars in process of erection and deposited on regular standard car trucks, after which a locomotive switches them to a transfer table, between 600 and 700 feet long, operated by electricity, back and forth to the particular point in the paint shops, where they are wanted.

The north bay is 90 x 400 x 58 feet, the entire ground floor being given over to the heavy wood-working machinery, and the operations of a ten-ton traveling crane for the rapid transportation of heavy material from one part of the bay to another. On the second floor, one-half of this bay, 90 x 200 feet, is used as the cabinet shop, and is filled with the lighter wood-working machinery; the other half being divided into rooms for the manufacture of partitions, window sashes, etc., while in one corner an Otis elevator 6 x 18 feet has been installed.

The south bay, 90 x 440 x 58 feet, divided into four sections, is fitted with a ten-ton traveling crane and given over to the manufacture of trucks. This has a machine shop, blacksmith shop and store-room for heavy materials under one roof.

This entire main building is built of steel, and is known as the ferro inclave construction, being made of sheet steel joined together with dove-tailed depressions, with cement applied outside and inside to a depth of two inches, the only wood used in the construction being the window frames and sashes, together with the roof timbers and flooring that is of three inch oak plank.

The paint shop, 250 feet south of this main or erection building, also of steel, is 280 feet long and 40 feet high, varying in width from 89 feet at the main or southern bay to 60 feet at the north end, where the last of 14 bays with which the shop is equipped is situated. Each one of these bays is fitted with standard gauge steam railroad car tracks, with large swinging doors opening into them.

The power house of steel ferro inclave construction, 50 x 140 x 33 feet, is situated near the paint shop and is equipped with five boilers capable of 225 horse-power each when run at high pressure. As all the machinery in the entire plant is run by electricity except the steam hammers, these boilers are used for heating the different buildings, the dry-houses, and to run the steam hammers. But one boiler is used in the summer, the others being put into use as needed, 800 horse-power being considered enough to heat the whole plant in zero weather, and probably not over three boilers will be used except in the extremely cold weather.

All of the electric power being obtained from the Connecticut River Power & Transmission Company, under a primary contract, no power is generated at the plant, but in a brick addition to the power-house on the north side are located the transformer house and the shaving supply house, part of this addition being used as a storage house for light materials used in car construction.

A thorough exhaust is installed in the shaving supply house, the first of its kind in Worcester, and by it all shavings, of which there is a great surplus, are gathered and by means of a shaving press these are pressed into 100-pound bales, after which they are piled up like cordwood, being cut up and used as needed.

The new steel building that will be ready for occupancy the last of this month is 90 x 280 x 44 feet, and will be used for the painting of electric cars, a ten-ton traveling crane running the entire length of the shop. Between the power-house and the electric car painting shop is the dry kiln 50 x 100 x 18 feet, with brick and cement roof. Installed in it is the Emerson system of drying, and next to this building is a lumber shed 70 x 80 x 18 feet.

Almost in the centre of the group of buildings and in the heart of the manufacturing part of the plant, is the building known as mechanical row, a building 40 x 224 x 30, divided into different rooms used for upholstering, special work, the tin shop, pipe room and store room for stock. Near this building is the building used for the paint store rooms, in which the floors are of dirt or cement and equipped with a complete system of tanks.

Near the right of way on West Boylston Street is the checking booth and a Fairbanks track scale of the most approved type.

The office building, 40 x 80, of wood, is fitted with every office convenience. It is situated at the Summit on Mountain Street, where it overlooks the entire plant. Oil houses and buildings for doing the smaller parts of work dot the grounds, and more are to be added as needed. The entire plant is surrounded by one and three-fourths miles of fence, nine feet high, of the regular manufacturers' style.

A progress picture of the plant adorns the front cover of this issue of the Worcester Magazine.

Chase Patent Granite Saw

During the last few weeks many men of prominence in the granite trade have been visitors to Worcester. Their objective point has been a small building in the yard of the Webb Granite & Construction Company, in which is being operated a mechanical marvel—the Chase Patent Granite Saw—which promises to draw world-wide attention to this city.

To the uninitiated visitor, the first feeling as he steps within this shed is one of sheer astonishment. Before his eyes is a vast bulk of latticed iron work, resembling closely a section of a bridge, within which is swaying with rapid motion a mass that reminds one of the vertebrae of some gigantic whale as seen suspended from the ceilings in our larger museums of natural history. High overhead is located the machinery that moves the swaying mass, and underneath, the eye takes in a huge block of granite, from which issues a staccato "whirr—whirr" that forcibly brings to mind that trite saying, "as hard as granite."

The outside frame of the saw is 30 feet long, 18 feet high and 12 feet wide, and is of actual bridge construction—in fact, this part, as well as the swinging frame, arms and blades, was made by the Eastern Bridge & Structural Company. The machinery that actuates the saw occupies the top of the frame and was made, for the most part, by the Rice, Barton & Fales Machine & Iron Company. The power is obtained from a motor located well out of the way on a platform on the top of the machine.

The granite blocks are supported on low, substantial cars traveling on heavy rails, a method that permits of sawing blocks of any length, or a continuous procession of short blocks. The low cars are quickly and easily loaded or unloaded at the Webb works outside of the shed by a traveling crane, and once within the shed are automatically fed against the blades of the saw by a screw, rotated by a friction drive, and instantly controlled from several points about the machine.

The steel blades of the saw are fastened to vertical wooden arms (technically, "heads"). The arms are pivoted midway on heavy shafts, the tops fastened to a beam driven by a crank attached to a ponderous crankshaft.

The resultant motion of the blades is oscillatory, the cuts being a series of independent intersecting arcs. The blades require no adjusting, as they are self-compensating for wear. The blades are long lived, for the first blade is short, each succeeding blade longer, and, when the blades become worn, the first blade is thrown aside, each of the other blades moved up one head and a new long blade attached to the last head. The increasing length of blade makes the cut one long slant.

Small steel balls are constantly fed to the front blade and are washed through the cut under the row of blades by a constant stream of water, to emerge at the bottom and be saved for continued use. The steel balls are a large factor in the speed of cutting. The "mud" produced by the operation is washed out with the balls.

The advantages claimed for this saw are many. Its operation is said to be very rapid—far faster than the best of former methods—exceeding the first estimates of its builders by 50%. It makes an absolutely straight cut, as the first short, rigid blade makes a rut in which the following blades must travel. It is stated that it leaves a very smooth surface, reducing the cost to bush or polish over one-half. There are 25 tons of structural steel in the outside frame and 8 tons in the inside frame, making the saw extremely strong and rigid, and also making it very long-lived. The saw is adjustable as to height and is declared to meet all commercial requirements in handling blocks of any length up to 6 feet high, for building or monumental purposes. It is said to show equal efficiency on other materials than granite.

On account of the greatly reduced weight to be pulled back and forth in the operation of this saw, as compared with the old gang saw, it is claimed to show a great saving in the use of power; its builders announcing that it will saw 12 feet per day per horsepower, as against 3 feet per day per horsepower by the best of gang saws.

Further, it is claimed that it will saw slabs thin enough for wainscoting, and will enable builders to use the superior grades of granite in place of materials now in use. Some varieties of granite are said to make the most beautiful of polished surfaces and to be entirely unaffected by time or exposure. This saw is expected to open up a new and long-desired use for granite, as no machine has previously been able to produce wainscoting.

A company to manufacture these saws has just been organized under the name of the American Granite Saw Company, with a capital of $500,000. That the entire issue of common stock, amounting to $375,000, was subscribed for in ten days by local investors, and that the preferred stock to the amount of $125,000 is fast being taken, is a wonderful showing of the financial strength of the city of Worcester. The success of the company is practically assured, for the directors that are slated for election are men who have shown marked ability in other enterprises and who are reckoned among the leaders of Worcester's financial circles: Mr. George D. Webb, Mr. Fred H. Daniels, Mr. Francis H. Dewey, Mr. Leander F. Herrick and Mr. Chas. F. Webb. At a recent meeting of the stockholders, Mr. George D. Webb was chosen president and Mr. Leander F. Herrick, treasurer. The company is fitting up handsome offices in the Walker Building and bids fair to become one of the most substantial local industries.

Mr. George D. Webb
President American Granite Saw Company

The machines will be built in this city. Seven models will be put on the market, with 9, 12, 14 or more blades, the intention being to produce machines to saw the softest or hardest of stone. It is stated that within the scope of these seven models will be found saws to meet every possible requirement in a granite saw. A machine was set up in Lowell last week, the first of an output which in years to come will probably be a tremendous factor in reducing the cost of cutting stone the world over.

The saws will be put out on a lease system, the company keeping the machines in order and making no charge for repairs, except those caused by ordinary wear or accident. It is announced that the royalty will be a very small percentage of the saving made by the use of the machine.

To the inventor of this machine, Mr. Chase, is due the credit for this great addition to the facilities for the cheaper production of cut stone.

In organizing this company Mr. George D. Webb, its president, has accomplished a financial task that would have staggered a less courageous and resourceful man. When he entered upon the work of organizing the company and securing the monetary interests necessary to float it, failure was freely predicted by many of his friends, and yet within ten days after the organization under a Maine charter was completed, the common stock was all disposed of and he had enrolled in the company as stockholders some of the heaviest business men in Worcester.

The George C. Moore Company

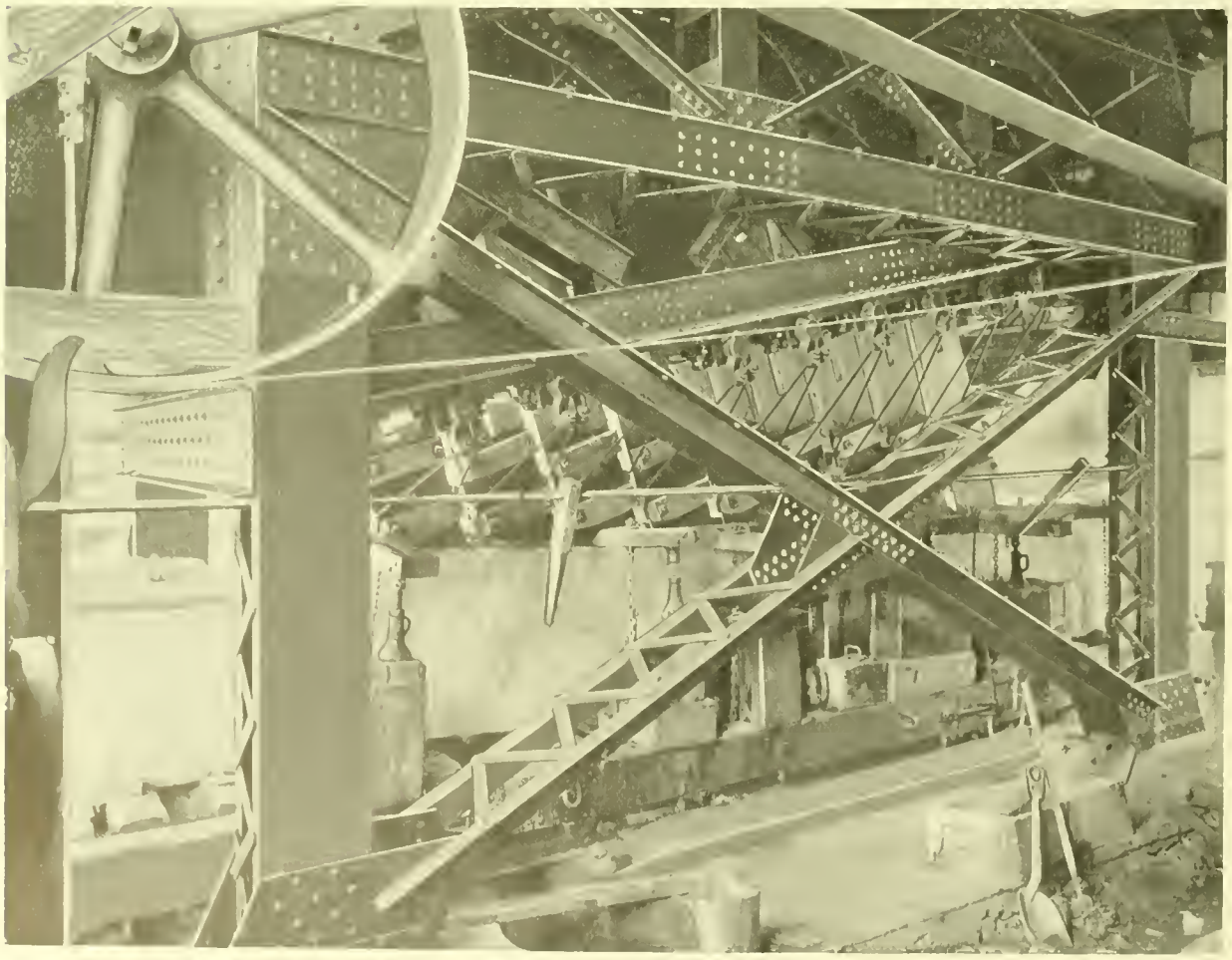
Although established in Worcester only since February, 1909, the Geo. C. Moore Company, 51 Union Street, manufacturers of elastic webbing, is entitled to recognition as one of the city's promising industries.

The company makes elastic belt webs and elastic webbing for garters and suspenders, and Mr. Geo. C. Moore, the founder of the business, may fairly claim to be the pioneer in this particular line of manufacture in this country.

Back in the early '80's he was connected with the Glendale Elastic Fabric Company, Easthampton, Mass., first as a weaver, later as foreman, and finally as superintendent, and in these capacities gained a wide knowledge of the business. After successfully establishing and operating factories in different places, Mr. Moore ultimately selected Worcester as an ideal city for the manufacture of his product.

He has associated with him his two sons and two daughters, each taking an active part in the company's affairs. The concern employs 22 hands, with a weekly payroll of $250.

Front View of Chase Patent Granite Saw, Showing Blades



Side View of Chase Patent Granite Saw in Operation

FRONT ENTRANCE

Story of the Corset H Company

The Corset H Company, which started five years ago last December in a small way in the corset business at 151 Front Street, has just moved into one of the most finely equipped and modern corset factories in this country at 40 Jackson Street, the concern, under the energetic direction of its President, Mrs. Arthur E. Gifford, and the other officers, having grown in half a decade to a point where it utilizes 250 machines, carries a large force of trained employees on its pay-roll, and occupies 50,000 square feet of floor space.

The new three-story building on Jackson Street, into which the company has just moved, was erected for its sole occupancy by Mr. Albert W. Gifford, founder of the Worcester Machine Screw Company, also a stockholder and one of the directors of the Corset H Company.

MAIN OFFICE

The building is a striking example of modern factory construction, comprehending every requisite essential to the company's business. It is built of brick and conforms in every way to the requirements of the factory inspection and building regulations. It is equipped throughout with the sprinkler system and every precaution is taken to guard against fire.

Every floor in the building is of dressed and finished hardwood, and the plumbing and toilet fixtures throughout the factory are of the best material and design, no expense being spared to erect a factory that will meet all the requirements of the business and at the same time secure the welfare of the employees.

Especial care has been taken to make the building as sanitary and healthful as possible, particular attention being given to light and ventilation. Without in any way sacrificing strength and solidity of construction, a great deal of side space has been utilized for windows, the frames of which are so constructed that the upper third can be dropped, thus insuring at all times a plentiful supply of pure invigorating air.

Two freight elevators are located at opposite ends of the building, the raw material being received at one elevator and from there distributed to the different workrooms to be made up, the finished product being taken down on the other elevator and placed on shelves in the stock-room ready for shipment. This arrangement eliminates all confusion in receiving and shipping goods, and facilitates the handling of the business.

An electric passenger elevator is being installed in the building for the benefit of the employees.

The entrance for employees is on the Beacon Street side of the building, while the offices are entered from Jackson Street. The offices, occupying the west end of the building on the first floor, are furnished throughout in Flemish oak, lacquered brass and grill work, with plain copper colored walls. The desks, telephone booth, filing cabinets and other office furniture are made up in mission oak, harmonizing with the general decorative scheme of the office.

A thoroughly equipped and efficient telephone system is installed throughout the building, and instantaneous communication may be had with any department, not only from the office, but from any part of the building.

A 100-horsepower horizontal boiler furnishes steam for heating and other purposes, while the motive power is generated by electric motors arranged on the group system plan; in this way it being necessary to use only sufficient power to operate the machines actually in use.

Realizing that efficient service can be given only by those mentally and physically fit to put their best efforts into the work before them, the company is paying special attention to the comfort and welfare of its employees. The fifty-six hour law has no terrors for this company, for ever since it first began business it has never operated more than that number of hours a week, the employees beginning work at 7.30 in the morning and stopping at 5 o'clock Saturday afternoons.

Mrs. Gifford, the president, believes that whatever tends to the welfare and security of the employees is money well invested, and she has set apart a "hospital room" in the factory, fully equipped with all the latest appliances for ministering to the needs of any employee who may become ill or injured while at work, and the services of a physician are available at all times. In addition to this, the company pays the expenses of any of its employees who are stricken with tuberculosis, sending them to a sanitarium until they are entirely cured.

A combination lounging, reading and dining-room is maintained on the top floor of the building, for those employees who desire to use it. This room is equipped with couches, tables and easy chairs, is supplied with the latest current periodicals and reading matter for the entertainment of the employees during the noon luncheon hour, while for those who carry lunches with them

PRIVATE OFFICE

to the factory, there are provided hot ovens for warming food or drink.

This room is one of the most popular with the employees and most profitable for the company, for those who use it return from the restful atmosphere of the place with both body and mind refreshed and invigorated.

Corset H Company Factory, Worcester, Mass.

The business was established five years ago by Mrs. Gifford, then Miss Mary G. Heintzleman, and the name "Corset H" adopted by the company as a distinctive trade-mark.

The company manufactures the "Ivy," "Corset H" and "Jewel" corsets, and its products enjoy a wide sale.

A large staff of traveling men represents the concern in this country, and arrangements are now being made by the company's London representatives to introduce its goods into Europe. Since moving into its present quarters, the production and output have doubled, and plans are now formulating for increasing the capacity of the factory to twice its present volume.

The officers of the company are: Mrs. Arthur E. Gifford, president; Arthur E. Gifford, vice-president and treasurer; Charles L. Smith, secretary; these with Albert W. Gifford forming the board of directors.

Central Supply Company

The limited space last month did not permit us to include, in connection with the notice of this company published at that time, a photograph of the new enlarged salesroom connected with their business in their building corner Foster and Commercial Streets. The Central Supply Company are just entering on the seventh year of business in our city under the present management, and during that time their business has kept pace with the enlargement of their facilities. From the small store on Waldo Street to the large building now occupied by them was a three years' growth, and the past three years has found them with none too large quarters.

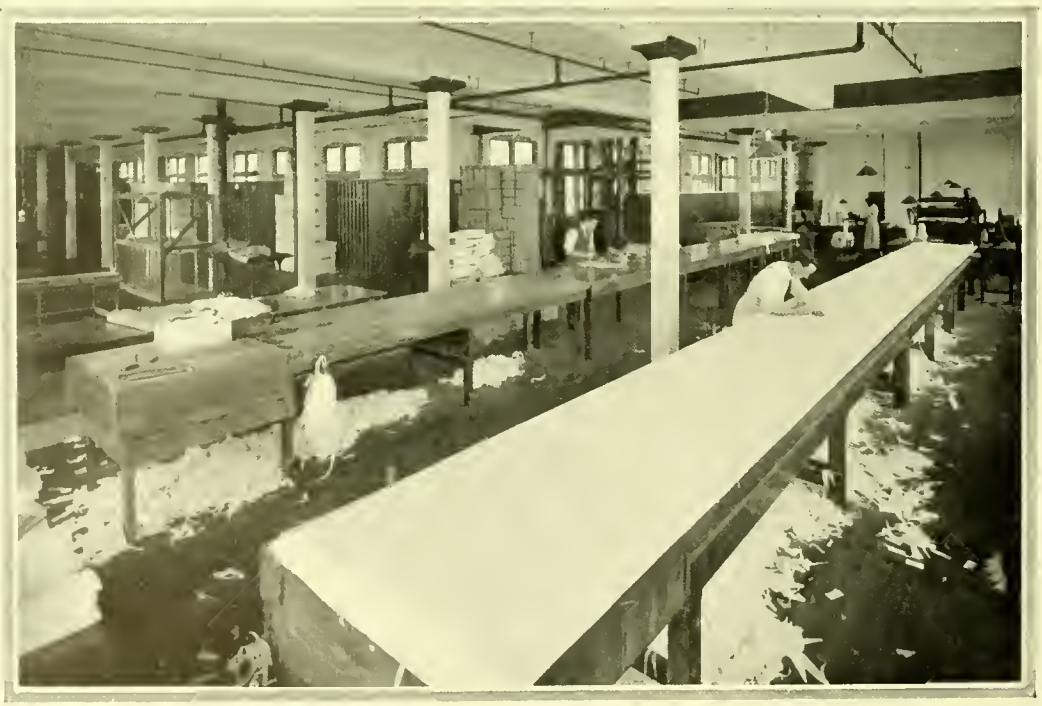
Many of their regular customers who patronize them for their factory and home needs in the steam department of their business do not realize that Worcester has in this company one of the largest dealers in water supply material and pumping machinery in New England. From the complete town supply, including very detail, to the small hand-pump for domestic use is a part of their stock in trade.

During the past season the water supply and pumping machinery, including motors of the new Dudley, Mass., water works, was furnished and installed by them with a capacity of 600 gallons per minute. Two similar outfits of equal size have been installed recently by them for the Worcester State Asylum at North Grafton, Mass.

At present this company has the contract for the water supply necessary for the construction of the Vanderbilt Speedway at Long Island, New York. In this instance water will be forced eight miles, and the contract represents quite a large figure.

This company in their steam department, in addition to the innumerable small outfits, have been recently at work on the new factories of M. J. Whittall; Worcester Bleach & Dye Works; Hobbs Mfg. Company; the Geo. Jewett Carriage Factory, and many others.

As the cut represents, a complete line of boilers, radiators, gas and gasoline engines, pressure tank outfits, pumps, pipe, valves, fittings, etc., forms a part of their large stock.



Cutting Room

Upper Stitching Room

The Pen

Form Room

Stock Room

Shipping Room

CENTRAL SUPPLY COMPANY'S SHOW ROOM

The Eddy Razor Strop

One of Worcester's growing enterprises is the Eddy Razor Strop Company. The spirit of the company is the true Worcester spirit, for one of the first statements made to the representative of this Magazine was "We strive for quality—not trimmings or style." The claims made by the company are these: The leather used in the strops is a product of a leading tannery, made especially for the use of this company. Ordinary leather, no matter how good, will not answer, for a fundamental part of the process of manufacture of the strop is the peculiar liquor used in tanning the leather. After the leather is received at the factory it is further treated by a secret process. Recent advances in this process have greatly improved a strop already superior. It is claimed by the makers that the Eddy strop remains in the same condition continuously, never requiring the application of any dressing. The makers further claim that the strop never glazes, allowing the razor to slip, but retains a soft, clinging surface that never fails to produce a keenness of edge on a razor that delights every purchaser. Long study and trial of various sizes and styles have enabled them to produce ten styles, selling at prices from 25 cents to $2. A strong recommendation of the standing of their product is the fact that they sell every year thousands of strops to makers of guaranteed, automatic stropping machines.

The product is distributed direct to retailers the country over.

Howard-Wesson Company, Inc., Engravers

A. E. Howard, president, and A. G. Wesson, treasurer, for many years connected with Woodbury & Company, have purchased the art and half-tone departments of said firm and have formed a new corporation to be known as the Howard-Wesson Company, Inc., for carrying on these branches of the work. With Mr. Howard's well-known ability for originality in design and retouching for half-tones, together with an accomplished corps of artists, and the services of the best photographers, and Mr. Wesson's long experience in wood and half-tone engraving and as a general manager, this new corporation is well prepared to do general publicity business, designing and engraving catalogues, advertising matter, etc. The old location at No. 4 Walnut Street, with offices opposite those of Woodbury & Company, will be retained, a number of high class men will be employed, and the business enlarged to meet the demand for the character of service the company is prepared to furnish.

Agent Dumas & Co., Manufacturing Stationers

William G. Geckie, formerly with the C. S. Benner Corporation of Boston, Mass., has formed a connection with the widely known concern of Dumas & Company, manufacturing stationers, 67 Middle Street, Lowell, Mass., and he has opened an office at 846 Slater Building, this city. Mr. Geckie has had excellent commercial training, and is an addition to the splendid corps of enterprising young business men that Worcester boasts. He has identified himself further with the city by joining this board.

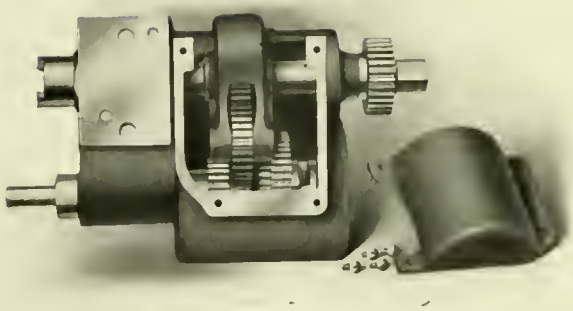


Fig. 1.—Inside View of Feed Box

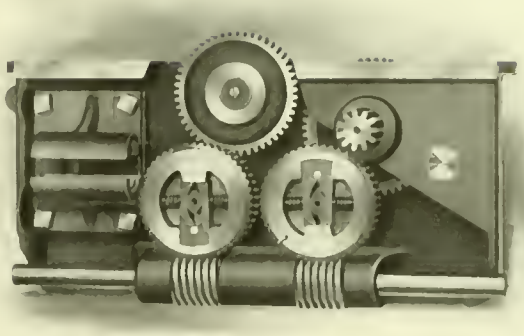


Fig. 2.—Inside View of Apron

Robbins Machine Company—Engine Lathe

Probably no one branch of Worcester's great industries has made such a rapid advance in recent years as that of redesigning machine tools. The greater part of these changes are, without doubt, due to the introduction of high-speed steel.

In order to disclose the capabilities of the new metal-cutting steels, and continue holding the lead in producing machine tools of maximum efficiency, Worcester machine tool builders have given the subject much thought and attention, and are now manufacturing numerous superior high-duty machines.

This article deals particularly with the new 14-inch engine lathe, manufactured by the Robbins Machine Company, 42 Lagrange Street, describing the tool in a limited measure, and with cuts illustrating the lathe and two of its principal features.

This lathe is designed to meet the requirements of manufacturers who realize the advantage gained by the use of a rigid high-grade tool that will withstand the strain required in using the best high-speed cutting steel, and equipped with only such attachments as have been thoroughly tested and found most desirable.

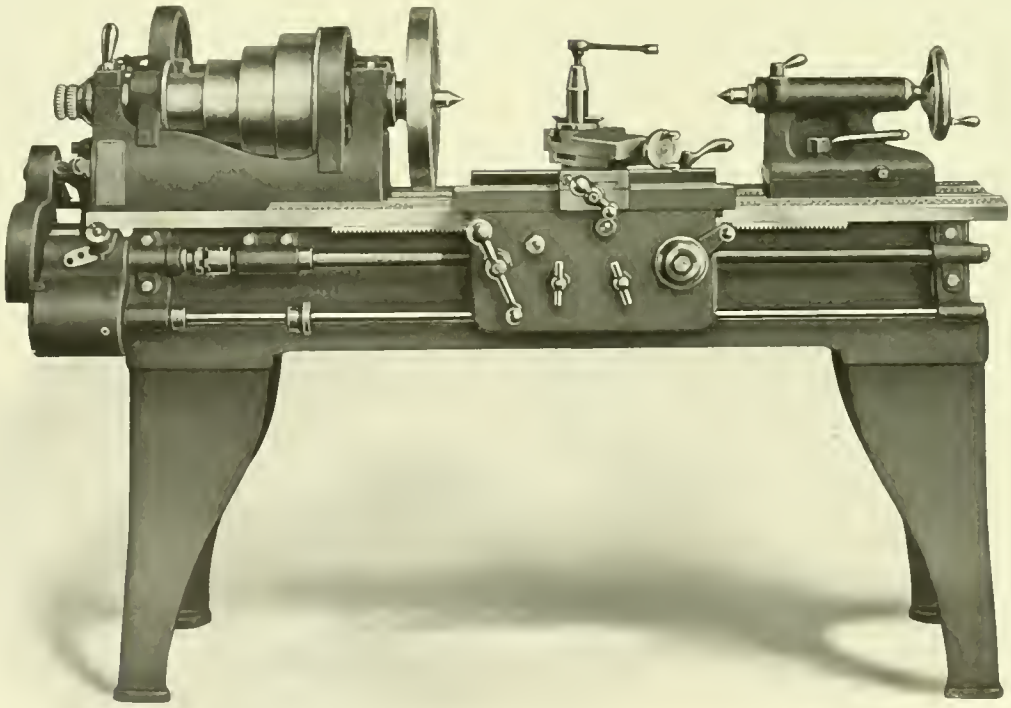
The reducing power of this lathe is in excess of what manufacturers can afford to waste, and the claim is advanced that it is superior in every respect to the best type of belt feed standard lathes of its size as a reducing lathe.

The quick-change feed box, which is shown in cut number 1, is constructed in a substantial manner, with steel gears cut from solid stock. It has four changes of feed, which can be easily operated while the lathe is in motion and taking a heavy cut. The range of feeds is all that is desired for general use.

The headstock is made with either three or four-step cones for wide belts and is strongly backgeared. The spindle is made from crucible steel, accurately ground, with bearings fitted to the best phosphor bronze boxes. The rest or carriage is made extra heavy and long on the ways, with the compound swivel and actuating screw graduated for convenience of adjustment.

The apron, which is shown in cut number 2, has adjustable friction drives for both cross and lateral feeds, with steel rack pinion supported by a bearing close to the rack, and so arranged that the lateral feed can be disconnected when cutting screws, as the lateral feed has an automatic stop fitted to carriage.

The bed is heavily braced by cross girders, and is made with



Robbins 12 and 14 Inch Engine Lathe

extra large V's, on which the carriage slides. The counter-shaft has self-oiling boxes and powerful rim friction-driving pulleys, that can be oiled while running. This lathe swings 15 inches over the ways, the front bearing is 2¼ by 4¼ inches, while the hole through the spindle is 1 1-16 inches diameter, with Morse taper centre number 4. The weight of the lathe, complete, with six-foot bed is 1600 pounds.

Workmanship, strength, durability and simplicity are the principles on which the lathe is designed and built.

Stewart Automatic Sewing Awl

A sewing machine for the pocket describes the little device that is being placed on the local market by the Stewart-Skinner Company, 5 Gardner Terrace, and known to the trade as the Stewart automatic sewing awl.

This small but efficient tool is claimed by its inventor, Charles A. Stewart, to be a combination of simplicity and perfection, and steps are now being taken by the company to manufacture the article at wholesale here, the demand for it necessitating the creation of a manufacturing rather than an assembling plant.

The Stewart automatic sewing awl is, it is claimed, a practical tool for all kinds of repair work, such as mending harnesses, shoes, tents, awnings, pulley belts, carpets, saddles, sails, suitcases, rugs, buggy tops, dash-boards, or any heavy material, and is especially designed to meet the needs and requirements of the farmer who has not the materials at his disposal to make necessary repairs, ordinarily, and the manufacturer, to whom time is money, and who, with this little device, can make repairs without having to shut down part of his plant, until an expert is called in to do a minor piece of repair work.

The awl is in three sections, and when screwed together, looks like the ordinary tool. The butt is of hardwood, hollow and contains a spool or bobbin to carry the thread. The middle section is of hardwood and nickeled steel, a hollow steel shaft through which the thread is run from the handle, protruding into the third section or tip.

This steel shaft is split into four sections at the tip, and into this split end is set the tool needed. The tip of this shaft is also grooved. The third section or tip of the tool is of nickeled steel, conical shape, and screws down onto the centre shaft of the middle section, compressing as it does so the split end of the metal shaft, thus holding the needle or tool firmly in place.

In the front end of the middle section, around the centre shaft, is a number of holes, in which are set the needles and tools, when not in use, the steel tip completely concealing them and keeping them where they can be readily found, as needed.

The tools that go with the sewing awl consist of three straight needles of varied size, and one curved needle, all four being provided with a special diamond point; one round awl for making buckle holes, one diamond point awl, and a small screw-driver. In addition to the needles that go with the equipment any machine needle of any size can be used, but the advantage of the needles provided is that they will penetrate any thickness of leather or other material with ease.

Instead of using the bobbin, thread can be passed through the butt end of the handle and used from a large ball, thus doing away with the necessity of refilling the bobbin. The contrivance is provided with an automatic tension, making it impossible to draw the thread out of the handle when tightening the stitch, yet the slightest pressure of the needle point against the material releases the tension and causes the thread to feed automatically.

Quality Work

A day is a more magnificent cloth than any muslin, the mechanism that weaves it is infinitely cunninger, and you shall not conceal the sleazy, fraudulent, rotten hours you have slipped into the piece, nor fear that any honest thread or straighter steel or more inflexible shape will not testify in the web.—Emerson.

Business is warfare of a certain kind. It is a hard, constant struggle to the finish—a survival of the fittest. The moment a contestant appears upon the field of commerce he is immediately challenged by a host of competitors and compelled to show cause why he should be permitted to exist. He must fight to live—he must conquer to succeed. It is this spirit of rivalry, this struggle for supremacy, this never-ending conflict, that sharpens men's intellects and spurs them on to better and greater accomplishments. The result is progress—a development of the individual—a keener appreciation of life and its purpose. Where there is no progress there is stagnation, and stagnation is death—death to the individual, to the industry and to the nation that is content to sit weakly down satisfied with some past achievement and see its place taken by younger and stronger competitors in this world-wide struggle for commercial supremacy.

Of the truth of this—to the tensity of the struggle—to the necessity of fitness to endure, none can better attest than the men of Worcester who, by the superior quality of their goods, their ability to over-ride all obstacles, their willingness to meet their competitors at home or abroad without fear or favor, have won a recognized place in the markets of the world.

To those who have succeeded, none have demonstrated their right to such recognition or ability to hold their position more quickly or more convincingly than the Allen-Higgins Wall Paper Company. The growth of this company has been little less than phenomenal; they have been making history in the wall paper business during the past few years. Equipped with a splendid working organization, confident of their ability to cope with conditions in whatever form presented, they set about the creation of an individual class of goods and at the same time developing an appreciation and a market for this distinctive product. This was defying precedent, inviting certain failure, said the oracles of commerce. Certainly it was not following the beaten path, but rather a departure from the main traveled roads and blazing a new trail across an untraversed country. That they have succeeded in their purpose is amply attested by the fact that they are running their plant to its full capacity and are now making plans for a greater production.

Style and quality of goods, a keen sense of values, a quick perception of changing styles and tendencies, the ability to meet them promptly and satisfactorily, the while steadfastly maintaining the standard of their work, have been the conspicuous factors of their success, and won them the confidence of a large and growing public. This confidence—the assurance of the right goods and the right treatment—is an asset in itself and one they guard with zealous care. In other words, they have appreciated the importance of the personal element in business, the intimate touch of man to man, the recognition that there are two parties to a transaction whose interests must be considered if business relations are to be long maintained. The greatest business builder to-day is confidence—quality goods the basis of every enduring business system or structure.

Too well do we know that "the sleazy, fraudulent, rotten hours you have slipped into the piece" will show in the fabric, in your business and in *you* individually. Too well do we know that they are the loose bricks in our business foundation that will sooner or later bring the whole structure tumbling about our heads. Emerson was right; he voiced a great fundamental truth that applies to business building as well as to man building.

But all this does not necessarily make a business a success. Your business principles may be right; your goods may be the best; your service to your customers leave nothing to be desired, but the public, the great, hustling, buying public, must be made to know it. This is a business in itself, a business within a business, to find a proper consumption for the product. The biggest men in the world to-day are salesmen. Some may call themselves merchants, doctors, lawyers, bankers, ministers or engineers, but they all have something to sell—goods or services or both. The man who creates the best market and secures the best prices is the best salesman. The world is his market; possibilities are well nigh unlimited; he sells what he convinces the public is to its best interests to buy.

Here again do the publicity methods of this company show clear and sharp in contrast with its competitors. Individual and interest-compelling is its advertising work—the aim of every advertiser in these days when publicity is such an important factor in the success of nearly every business large or small. Yesterday we said that competition was the life of business, but to-day we know that *advertising* is not only the life of a business but in many cases its very salvation.

So it is that "Vogue papers" and "Made in Worcester," a further guarantee of integrity of manufacture, are continually becoming better known and more wanted. In every sense they are quality goods made by quality folks for quality people.

The Machinery Markets

Says the Iron Age: The demand for small machine tools has fallen off throughout the country, and most of the business coming before the trade is in the shape of orders for single machines. Many of these, however, are for machines of such a large size that the expenditures for them would cover the cost of a fair number of small tools. The demand for machinery for the automobile trade has slackened, except in the West. It is apparent that threatened labor troubles have affected the demand for such power equipment as is adaptable for use in office buildings and other large structures.

MAY 23 1910

SENATOR BAILEY'S SPEECH

ONE COPY RECEIVED

The WORCESTER MAGAZINE Illustrated

Sky-Camera View Hobbs Manufacturing Plant. The New Addition is the Building in the Centre.

MAY, 1910

$1.50 per year

Published by the Worcester Board of Trade
WORCESTER, MASS., U. S. A.

15 cents the copy

Central Supply Company

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

A visit to our warerooms will repay any intending purchaser

Telephone 4440

Foster, Commercial and Mercantile Streets Worcester, Mass.

Established 1871

TRADE H&R ARMS CO. MARK

Incorporated 1888

H&R ARMS Co

Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

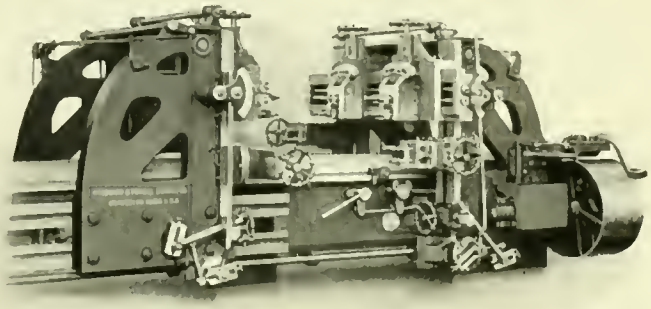
VOL. XIII. MAY, 1910 No. 5

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

SENATOR BAILEY'S SPEECH AT THE ANNUAL BANQUET, 117-121
DEAD HORSE HILL CLIMB, 122
SPRINKLERS IN DEPARTMENT STORES, NATIONAL FIRE PROTECTION ASSOCIATION, 123
COMMISSION GOVERNMENT AS WORKED OUT IN HAVERHILL, MASS.—Secretary Albert M. Child, 126
NINETY-SIX HOURS OR FORTY-EIGHT—PROPOSED CHANGE IN DEMURRAGE RULES, 127
ANNUAL BANQUET OF WORCESTER BOARD OF TRADE, 128-132
ANNUAL MEETING OF WORCESTER BOARD OF TRADE, 133-139
EDITORIAL REFLECTIONS, 140-141
The Widening Influence of Worcester.
Value of the New England Corn Show.
Commission Government.
DEPARTMENTS, 142-143
Local Trade Conditions.
Worcester Patents.
Worcester Quotations.
Current Events.
BOARD OF TRADE ACTIVITIES, 144-145
INDUSTRIAL NEWS, 146-151

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

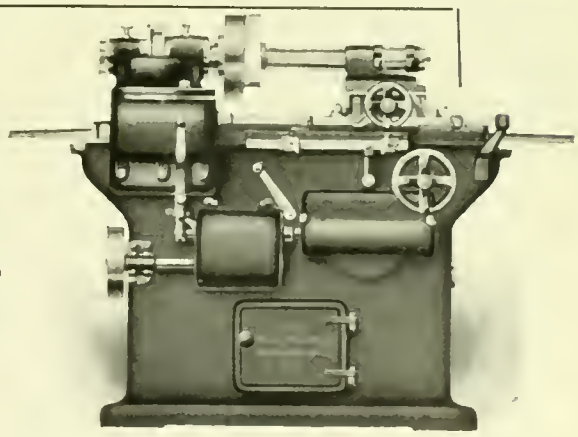
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden-A 3, Germany and Austria.

WE MANUFACTURE

GRINDERS



CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,

ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Coates Flexible Shaft

Will stand all kinds of abuse. Can be twisted and turned in any way without interfering with the tool or business end.

Place the motor on the floor, take your two pound breast drill and "DRILL." On account of its portability and great utility in inaccessible places and tight corners, the Coates Outfit turns many puzzling time-consuming jobs into simple propositions.

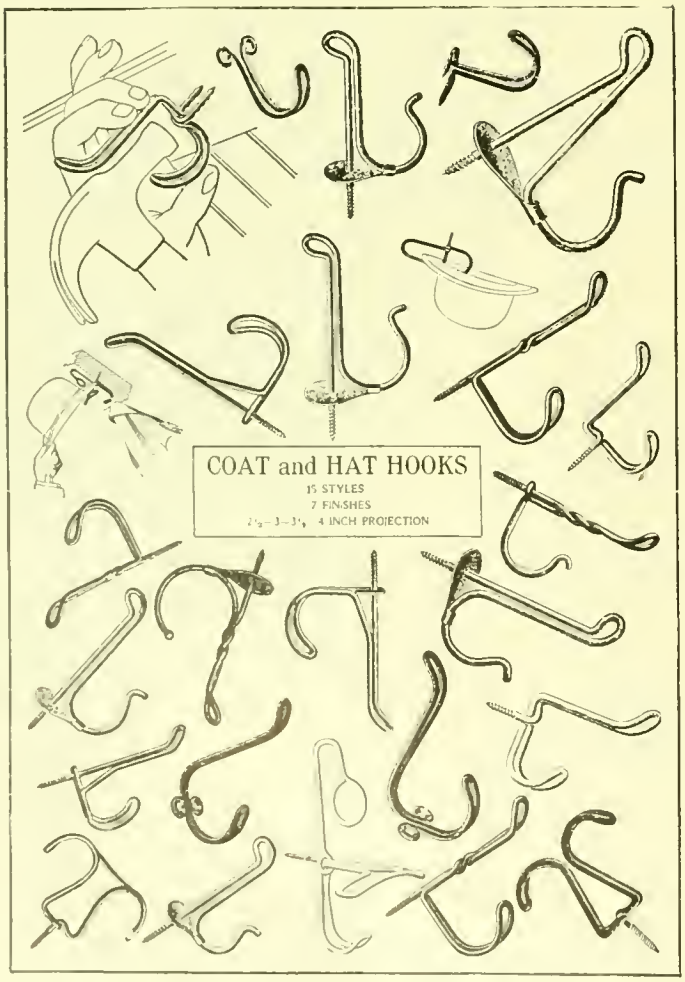
Learn More About It

Send for book W

COATES CLIPPER MFG. CO.
Worcester, Mass.

THE HOWARD-WESSON CO.
Successors to
THE ART AND
HALF TONE
DEPARTMENTS
of
WOODBURY & CO

ALL ORDERS
for DESIGNS
HALF TONE
ENGRAVINGS
AND
PHOTOGRAPHS
Will receive our Prompt Attention
2670 TELEPHONES 2671
4 WALNUT ST
OFFICE No. 526



MADE IN WORCESTER BY THE WIRE GOODS CO.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Very Sincerely
Your Friend
J. W. Bailey

COPYRIGHT 1910 BUCK WASHINGTON D. C.

ENGRAVED AND PRINTED BY WOODBURY & COMPANY
4 WALNUT STREET WORCESTER

The WORCESTER MAGAZINE

Dangers that Menace the Republic

Speech of Hon. J. W. Bailey of Texas Before the Worcester Board of Trade at the Annual Dinner in Mechanics Hall, April 19, 1910

PRESIDENT Charles T. Tatman, toastmaster of the evening, in introducing Senator Joseph W. Bailey of Texas at the annual banquet April 19 at Mechanics Hall, said:

"At the time of the last United States census, ten years ago, the population of Massachusetts was nearly 3,000,000, and even then Texas was a little larger. The area of Massachusetts is about 8,300 square miles, and Texas is likewise a little larger. In fact, Texas would cut up into thirty-two states the size of Massachusetts.

"Our honored guest represents the only state among the United States which was ever an independent nation.

"Long years ago Daniel Webster represented Massachusetts sentiment in opposing the annexation of Texas, on grounds of policy. Abraham Lincoln in Congress opposed the beginning of the war with Mexico, which resulted from the annexation of Texas; and Henry Clay stood with the other members of the Whig party and the whole North on the same issue. Yet Lincoln voted for supplies to carry on the struggle to support the honor of the nation, and Webster and Clay each gave a son as a sacrifice to patriotism in the war with Mexico.

"And as John Hay has said: 'Texas was as sure to be incorporated into the Union as two drops of water touching each other to become one.'

"We have differed sometimes on matters among ourselves, but in any dealings with foreign nations all sections of the country have always stood together for the common cause.

"There is one characteristic of our distinguished guest from Texas which in my opinion ought firmly to endear him to the people of this country—a quality which some public men in high places have sadly lacked—and that is a profound respect for the Constitution of the United States.

In discussing the plan of the Constitution, Daniel Webster said: 'It is the part of wisdom to keep the general government and the state government each in its proper sphere, avoiding as carefully as possible every kind of interference.' That was and is the Massachusetts doctrine, and I believe it is the doctrine of the great constitutional lawyer who is our guest to-night.

"He was admitted to the bar before he was twenty-one, and became a representative in Congress at twenty-seven. It is a wonderful thing for so young a man to have served that great State of Texas in the two branches of Congress for nearly twenty years.

"Massachusetts greets Texas with affection, and the Heart of the Commonwealth beats with warmth and pleasure in welcoming United States Senator Joseph W. Bailey."

To the inspiring strains of "Dixie," Senator Bailey arose, and at the conclusion of the ovation tendered him, said:

I hesitated to accept the invitation to meet you here to-night, because I feared that my public duties would not permit me to come, but I finally yielded to the persuasion of my friends who sit on either side of me, and I even abandoned another errand of some importance in order that I might keep the engagement which I had made with you. I was anxious to come, because I knew enough of your history to create in my mind an earnest desire to know your people; and I felt that there could be no better place than Worcester at which I might meet and study them. It was my good fortune, as has already been stated by the Speaker of your House, to enter Congress when this great district was represented by his father, who honored me with his friendship; and it is a matter of special satisfaction to me that I can count your present member, Mr. Washburn, among my personal friends, for outside of his politics I esteem him as one of the best men in Congress. Mr. Walker and Mr. Washburn were not, however, my only friends from the Worcester District, because, if I am not mistaken, your people, in a lucid interval, once elected Mr. Thayer, a democrat, to Congress (laughter), and I enjoyed the most agreeable relations with him.

Not only did I think Worcester a suitable place for meeting your people, but I felt that no occasion could be so favorable for cultivating an acquaintance with them as this, when you are celebrating an event which not only brought imperishable glory to Massachusetts, but which also reflected infinite honor upon our whole country. Texas claims a part of the priceless legacy of Concord and Lexington, just as she cheerfully shares with you the no less priceless inheritance of the Alamo and San Jacinto. I was glad also to come, because I have long believed that the better we know each other the better we must like each other; and I am sure there can be no better way to promote a cordial good will between the different sections of our country than for the men of each to mingle with the men of all the others. I will not offend your intelligence to-night by saying that there are no sections now, because that is not true. There

always have been and there always will be a North and a South, an East and a West, and I am entirely willing that such should be the case provided that these geographical divisions shall not engender sectional animosities, and that even our fiercest rivalries shall be no more than the struggle of each section to excel the others. I do not know the temper of your people in that respect, but I can assure you that all traces of sectional bitterness have disappeared from among our people; and the man in Texas now who would attempt to teach the gospel of hate against Massachusetts would find himself without sympathy and without an audience. (Applause.)

We still cherish our sectional pride,

but we have discarded our sectional prejudice. Without any apology for our Confederate fathers, we have turned our faces resolutely towards the future, and we realize as fully as you do that the destiny of our Union must at last become the destiny of every section. We do not any longer ask the battle-scarred veteran on which side he fought in that unhappy war between the States, for we know that if some new war shall summon the flower of our country again to arms, the sons of the men who won the first Manassas will join with the sons of those who won at Gettysburg, and with their precious blood they will consecrate a new battlefield, uniting the glories of both. (Applause.)

It is customary for those who deliver addresses on the return of this day to occupy their time in eulogizing the courage, the patriotism, and the sacrifices of the men who made the 19th of April one of the world's great anniversaries; but I shall not follow that custom to-night. I have appointed for myself a different though a less agreeable task. It is a task, however, which has long been necessary, and which becomes still more necessary as each year is added to the past. Instead of laying upon the graves of the heroic dead such a poor tribute of affectionate gratitude as I could frame in words, it is my purpose to testify that we value the liberty and the independence which, in such a large degree, we owe to them, by pointing out to you some of the dangers which now environ us, and urging you to avert those dangers so that we may transmit that liberty and independence, without impairment, to our children. Of course, when I speak of these dangers, you must not understand me as meaning that some foreign foe threatens our country's peace. My imagination does not picture great battleships with frowning guns trained upon the cities of our seacoast, nor do I hear the tramp of an invading army, upon whose footsteps misfortunes follow fast. Our dangers are not such as those. Our strength and resources, if properly conserved, coupled with our fortunate isolation, will be forever sufficient to protect us against all external enemies. The dangers of which I shall speak to-night are domestic and, therefore, the more serious, because they are, on that account, more apt to be overlooked.

If I were called upon to specify the greatest perils which threaten the stability of our institutions and the happiness of our people, I would answer without hesitation that they are the monopolies and the socialism which have recently made such rapid growth among our people. Less than ten years ago I began to admonish the people among whom I live against these twin dangers, and many thoughtful men laughed at my fears. I have however, been justified much sooner than I expected.

The concentration of capital

has progressed at such an amazing pace that almost every important commodity is now controlled by some great corporation or combination of corporations; and socialism has made its converts until we have seen a city larger than this one in which you live elect a socialist mayor. Even those who sneered at me and at those who thought with me, as shallow alarmists, have come to understand the gravity of our situation, and it is no longer necessary to argue with them that a serious danger confronts us.

The monopolist with an impudence unparalleled stigmatizes every man who complains against any governmental wrong as an anarchist, and he seems to think that we are seeking to take what belongs to him, because we would prevent him from taking what belongs to other people. He talks with an unctious solemnity about vested rights, and seems to think that it is possible for men to acquire a vested right in doing wrong. He has not learned that the earnest and thoughtful men who would protect his property from the violence of the mob are the same men who would protect the toiling millions from his power to plunder them through the favoritism of unjust and unequal laws. I do not hesitate to declare it as my belief that monopoly has done more to breed the socialism which now menaces this republic than all the socialist orators and authors who have ever lived. It has furnished those misguided zealots every argument with which they have been able to inflame the minds of ignorant men, and I would not lift my hand to save it from the consequences of a fury which its own misconduct has provoked; but it is not necessary to give our country over to the unspeakable misery which socialism would inflict upon it in order to save it from the evils of monopoly. The public mind and the public conscience have been so thoroughly aroused against monopoly that I need not aggravate your indignation by dwelling upon that subject now. I can safely leave it to the judgment which the people have deliberately formed and are ready to pronounce against it.

Our situation is made more difficult to deal with by the fact that while the socialists and the monopolists hate each other, they are ready to make common war on every man who opposes both. The monopolist shrewdly calculates that if he can eliminate the man of moderate views from our politics, and reduce the contest to him and the socialist, he will have a majority, not so much because the majority believes in monopoly as because it abhors socialism. The socialist strives in every possible way to convince the people that socialism offers them the only refuge from monopoly, and he hopes to have a majority not so much because that majority believes in socialism as because it abhors monopoly. That the efforts of these opposing and contending forces have not been entirely without success is made apparent by the fact that many

good men have become so confused

that they think it necessary for all men to espouse one side or the other. As for my part, I should feel precious little interest in a conflict between monopoly and socialism, because I know that my country loses, no matter which of them may win.

Widely apart as these two extremes appear to stand, they are not so much unlike when we study them attentively, for after all socialism is monopoly run mad. It is state monopoly, no more nor less than that. There is, of course, a vast difference between the distribution

of wealth which they seek to effect. If monopoly is permitted to run its course unchecked a sufficient length of time, a few men would own everything in this country, while socialism, if once established, would render it impossible for any man to own anything in this country. (Applause.)

We sometimes hear men say that socialism would be an ideal state if it were possible of attainment. I utterly reject that doctrine. I do not believe that it is desirable even if it were attainable. It would eradicate from every heart and from every mind that enlightened selfishness to which we owe the progress of the human race. How could we teach our children to cultivate those virtues which command success if success would bring no better reward than failure? If it were better for mankind that all men should be equal in wealth and in position, then a just and all-wise God would have endowed all men with equal industry and with equal intellect; and as He did not make all men equal in those respects, no socialist legislator can ever make men equal in all other respects.

To complain because some men accumulate more wealth or achieve a greater fame than others is to rebel against God's ordinances. He did not make all things equal, and shall we think that we ought to do what He did not deem it best to do? He made the valley, and from its bosom He lifted the mountain; He divided the waters of the earth into great seas and into rivers, which carry the never-failing tribute of a thousand smaller streams forever to the ocean; He made the giant oaks which stand majestic against His raging storms, and He made those tender flowers which his fairest daughters wear for ornaments. He made the eagle, which typifies strife and strength, and He made the dove, that speaks to us of gentleness and peace. He made the lion, whose fierce nature makes him the monarch of the forest; and He made the cats with which little children play. In all of these inequalities and in these diversities I read God's will, and I know how impossible it is for men to reverse it.

There is, however, an equality for men which every rule of justice requires us to observe, and that is their

equality before the law.

In every place where justice is administered no distinction of wealth or poverty, of station or pursuit, should be known. Before an upright and fearless judge the rich and powerful must stand uncovered, while the weak and poor can boldly claim the protection of the law. All shall be measured there by the same rule of justice, and it will be worth this nation's life to adopt a different standard. Here again we find a conflict between these dangerous extremes. The socialist wants men equal everywhere, while the monopolist would not recognize their equality anywhere. Against the Utopian folly of the one, as well as against the gross injustice of the other, all thoughtful and patriotic men must protest, and will protest, until, in the providence of God, this republic shall follow those free nations which have gone before it. (Applause.)

But when socialism has reduced all property to a governmental ownership, and vainly attempted to make all men equal, it will not even then have done its perfect work. While many of those who profess that faith will challenge my assertion that it aims to overthrow the church and abolish the domestic relation, all men familiar with the teachings of those who lead that movement know such to be among its objects. With all property rights annihilated, with the motives which inspire our youth to ambitious dreams dead in every bosom, with the altar of every church leveled to the ground, and our homes desolated, what could be more appalling? And yet that is the condition to which socialism invites us. The supreme duty of this hour is that democrats and republicans shall stand steadfastly against this new and dangerous creed, and any party that compromises with it in order to secure its votes should be defeated and condemned.

The republican party—and I speak it in no partisan sense—has never committed a graver crime against our institutions than when, for the sake of a few municipal offices in the city of New York, it combined with an organization whose votes would not be worth counting except for its socialistic members.

Politicians of both parties will repeat that crime unless they are taught that such a combination will turn more votes against their candidates than it will attract to them.

If you are a republican, you cannot be a socialist; and if you are a democrat, you cannot be a socialist; and let us at once and for all time admonish the managers of our party organizations that they shall lose our votes whenever they prostitute our party to secure socialist support. Let us make it plain here and hereafter that for every socialist vote gained by such an unholy alliance two conservative votes shall be lost; and in this way we shall save both parties from the taint of socialism, and force those who have their hands lifted against our institutions and against our civilization to stand separate and apart,

powerless to do harm

to any except themselves.

That socialism is better than the worst condition which could exist under this government I refuse to believe; and certainly it is the essence of despair for us to admit that a government founded upon so many sacrifices and preserved through a bloody and fratricidal war has failed to serve the purposes for which our fathers instituted it. Are you ready to admit that the republic which Lincoln gave his life to save is a failure? Will the democrats among you acknowledge that the principles of Jefferson can no longer guide us safely? No, my countrymen, the thoughtful millions of this land will not make that admission. The blood of the Revolution was not shed in vain, nor shall the blood of the Civil War cry to us from the ground unanswered.

But, my countrymen, while monopoly and socialism are our greatest, they are not our only dangers; and next to them must be reckoned the ignorance and the cowardice of our public men. I am sure that there are many in this audience, as there would be in any audience which could be assembled in this country, who will wonder why I do not include venality with ignorance and cowardice; for the muck-rakers have led many good people to believe that almost everybody who holds a public office is dishonest. That, my countrymen, is a grave mistake, and the men who are saturating the public mind with a suspicion against all men who are engaged in the public service are doing those who read their libels more harm than they are doing those against whom they are written. Venality is not a serious danger in American politics to-day, and it can never become so until the electors themselves are utterly corrupt. The people will never elect men who are so base that they will sell their legislation to selfish interests, or betray

their country for the sake of gold, until the nation itself is rotten to the core. Of course, I do not say that there are no dishonest men in public life, for we have occasional and painful proofs that such men can sometimes deceive the people and secure great offices; but they are the exception and not the rule. There are rascals now, just as there were rascals in what we are pleased to call the elder and the better days of this republic; but they no more control this government to-day than they did in those other days. I have been in Congress for twenty years, and during that time I have associated with perhaps two thousand different members of the House and Senate. Among that large number I have never known ten men whose integrity I have doubted, and certainly the proportion of bad men among them has not been greater than in the other walks of life.

But while I have suspected the honesty of only a few of

my Congressional associates,

I have been compelled to doubt the wisdom and the courage of many. Our great mistake is that we bestow our suffrage on a man who pleases us with his address without requiring him to understand the business about which he is asking us to employ him. He comes amongst us with his gracious manners, and we are less exacting about his intellectual equipment than we ought to be. We send him to the Legislature or to Congress, and he takes his seat ignorant of almost everything that a representative of the people ought to know. If he votes correctly, it is an accident, for no matter how honestly he desires to do his duty, he must fail unless he understands the questions presented for his decision. That, however, is more your fault than his. It is neither the vice of our system nor a vice of the age in which we live. It is simply an amiable weakness which leads the people to elect a man whom they happen to like over one on whom they can safely impose a great duty. Of course, I do not indulge the hope that we shall ever reach a time when every man elected to an office will be qualified to discharge its duties. The politicians are like the poor in the Savior's time; we have them always with us, and we shall have them with us to the end. Fortunately, these politicians belong to no party and come from no section. Of course, in this day most of them are republicans, because a large majority of all representatives and senators are republicans. (Laughter.)

But bad as the ignorant public servant is, my countrymen, he is less dangerous than his colleague who is afflicted with cowardice. The ignorant man may sometimes serve a useful purpose by his very ignorance, because it will often be so conspicuous as to impress the people with the absurdity of electing such men to those great assemblies where the legislation of a free people must be matured. But the man who knows what is right, and yet refuses to do it because he fears that it will displease his constituents, can offer no excuse for his misconduct, and seldom serves, even by accident, a useful purpose. I have no patience with a man who seeks the people's office and is indifferent to the people's will. I hold that this is a representative government, and that those who are chosen to represent the people must faithfully execute their will; but I also hold that whenever the people's will requires him to do what he knows to be against the interest of the people, he should not hesitate one instant between his office and his duty. A man who is worthy of the people's confidence will surrender his official position a thousand times rather than do what he thinks is wrong. My rule is that whenever a man finds it impossible to obey the will of

the people without doing violence

to his conscience and his judgment, he must resign his office, and allow his constituents to bestow it upon some man who can faithfully represent them without sinning against his own sense of right. Obedience or resignation should be the people's demand; resignation rather than obedience to what he knows is wrong, should be an honest representative's motto. In this way, and in this way only, can we preserve our present form of government.

Ignorance and cowardice among our public men will not only express themselves in the enactment of bad laws or in a failure to enact good laws, but they produce other results of the most pernicious consequence. They must inevitably divert our public discussions from great principles, and reduce our political debates to charges and counter-charges. I do not, of course, intend to say that it can ever be permissible for us to ignore the moral character and the personal conduct of those who offer themselves as candidates for public office, and I shall always insist that those who wear the first honors of my party shall be fit, under a moral as well as under an intellectual test, for the work to which they may be called; but no calamity could be much greater than to have our elections determined by mere personal preferences rather than according to great principles. It has long been our boast that this is a government of laws, and not a government of men. That boast, however, must become an empty one whenever we consider the personality of a candidate more important than the principles which he advocates. In such a state of mind the people will approve whatever is recommended to them by a man who happens for the time to fill the public eye, and reject even the most wholesome measures proposed by men who do not at that particular time happen to enjoy their favor. They soon become the victims of a hero-worship on one hand, or of insane hostility on the other; and thus they prepare themselves to hail the man on horseback.

You may not consider it polite for me, while I am your guest, to cite a circumstance transpiring in your great Commonwealth to illustrate a bad political tendency; but even at the risk of seeming to lack in courtesy to my hosts, I am constrained to comment on a recent congressional election in Massachusetts. I shall indulge in no partisan discussion of it, because I know that the republicans who hear me would not enjoy that, and the democrats are not present in sufficient numbers to applaud what I might say, even if it should happen to please them. (Laughter.) In that campaign the democratic candidate was a former republican, and the republican candidate was a former democrat; and I have been told by those who watched it with a personal as well as a political interest, that it was

difficult to tell from the speeches

of the respective candidates the party to which each belonged. (Laughter.) They both assailed—and with good cause, according to my judgment—the tariff bill which recently became a law, and the republican nominee went beyond his democratic opponent in denouncing Aldrichism and Cannonism.

My advice to you republicans is that you cannot beat us and yourselves at the same time; and if you are willing, the doors of our democratic church are open to

you, and our forgiveness passeth all understanding. (Laughter.)

I'll tell you what is the matter with you: You beat us so badly that you wanted a rest. Feeling that we could not put up a fight you got to fighting among yourselves. There are a great many men in the republican party who are not republicans, just as in the democratic party there are a great many democrats who are not democrats. Now I want to exchange prisoners with you. (Laughter.)

What we want in this country, my friends, are men who follow their convictions wherever they lead them, and who do not ask whether there's any office at the other end of the road or not. (Applause.)

I have just as much respect for the republican as I have for the democrat so long as he behaves himself. (Laughter). You, no doubt, have as much respect for a democrat as a republican so long as he behaves himself.

I have no respect for either of them whose sole aim is to get into office. I would not trust any man, whether he is in Massachusetts or in Texas, who regulates his politics according to the prevailing majorities. Principles do not change with latitude and longitude. They are as eternal as God's laws. Men will change their opinions, and when they do they ought to change their party. Whenever a republican gets to be a democrat, he ought to say so, and whenever a democrat becomes a republican, he ought to say so, and not be affiliated with a party to which he does not subscribe in principle. This is a crime against the country as well as against yourself. And yet this, my countrymen, is what has been breeding this socialism in the United States for the last twelve or fifteen years. We have hardly engaged in the discussion of principles in fifteen years, we have been so busy discussing men.

I have no patience with a man who, thinking himself too good for his own party, and the other party too bad for him, yet seeks the nomination and the honors of a party whose leaders and legislation he feels compelled to assail. Let us hear less about men, and let us address ourselves to an earnest consideration of the great principles upon which this government must be administered.

Amidst all these dangers and these perplexities, numerous and great as they are, I do not despair about the future of my country. I believe in the patriotism and in the intelligence of my countrymen, and I am confident that they will wisely solve these problems. But even if I did not believe in them, there is One above us in whom I confide, and I can not believe that He, under whose providence the sparrow falls, and whose mercy stills the clamorous raven's nest, will permit this government of the people, and for the people, and by the people to perish from the earth. I do not doubt that in His own good time and in His own good way, He will inspire His children here with the wisdom to know and with the courage to do whatever may be for the best, and that generations yet unborn shall enjoy the blessings of this the greatest, the freest, and, therefore, the best government that ever rose to animate the hopes or to bless the sacrifices of mankind. (Prolonged applause and cheering.)

The Luxogravure of Senator Bailey

The beautiful and life-like luxogravure of United States Senator Joseph W. Bailey of Texas, which forms the frontispiece to this issue of the Worcester Magazine, is a splendid example of the artistic skill of Woodbury & Company, Inc., of this city. Some of the characteristics of this process make it admirably adapted for portrait work, as it has the strength of the photogravure without its metallic harshness. Perhaps no better example of what can be accomplished by the luxogravure can be imagined than is shown in this instance.

The great criticism of all modern half-tone printing is its lack of durability, its temporary and evanescent character, principally due to the fact that the paper on which the half-tone is printed is not calculated to endure.

The Carnegie Institute at Washington has spent thousands of dollars experimenting with papers in the search for one that would last as the printing and writings of the ancients have lasted on the vellum and parchments that they used. They worked slowly and with infinite pains, but the results achieved from the papyrus of the Egyptians to the black letter period and the illuminated missals of the Middle Ages, have been wonderfully enduring.

The search nowadays is for something almost equally permanent, upon which can be stamped in much more rapid fashion the mechanical marvels, both in picture and typography, of this generation. The Carnegie Institute managers believe they have secured a paper which will last two or three hundred years, and they are now in search of a type of engraving that will continue clear and distinct as long as the paper lasts.

It is well known that the paper on which half-tones must be printed, in magazines even as fine as this, made as it is from chemical wood pulp and coated with clay, can endure but for comparatively few years, and for portraiture especially, this quality of permanence is of much importance. It is claimed for the luxogravure that it adapts itself readily to the best and most durable papers and thus becomes a really lasting impression.

If this should prove true, those fortunate enough to secure one of these Magazines will obtain a portrait of the distinguished Texan that will outlive themselves.

With all our appreciation of what is excellent in the antique and historical, it is strange that we should have been content with printing illustrations which cannot last many years. Every photographer knows that the photographs made today are, at best, of uncertain lasting quality, while the old daguerreotype was almost perfect in this respect. The luxogravure prints, on the other hand, made with the most lasting plate inks and printed on strong linen fibre papers, will last for centuries unchanged.

It is therefore especially gratifying to know that it is a Worcester concern that is bending all its energies to achieve leadership in a field still comparatively unoccupied by American engravers—a field so valuable to the historian as well as to every lover of the art preservative of arts.

The programme of the convention of the National Machine Tool Builders' Association, to be held at Rochester, N. Y., Tuesday and Wednesday, May 24 and 25, has been prepared by Mr. Charles E. Hildreth of this city, and a director of this board, who is the secretary of the Association. The sessions promise to be among the most interesting ever held, and there will be a large delegation of Worcester tool builders at the convention. They will be held at Hotel Seneca. The feature of the entertainment will be a reception given Tuesday evening by Miss Kate Gleason, head of the Gleason Works, Rochester, at her Spanish castle, a beautiful suburban estate, recently completed.

Of National Interest

The Dead Horse Hill Climb in this City, June 4, to be One of the Four Licensed by the American Automobile Association this Year

THE annual hill climb of the Worcester Automobile Club on Dead Horse Hill, which has become a national event, falls this year on Saturday, June 4. Last year there were fully 30,000 people attracted to the event, and this year the attendance—should the day be fine—promises to be even greater than ever before.

This hill climb is one of the four that have been authorized by the American Automobile Association this year, only three others in the whole United States receiving this authorization.

No greater compliment could be paid the management than this fact attests, and the success that has attended all the previous events promises to be exceeded this year.

The contest begins at 1.30 p.m., unless the number of entries should prove too large, in which event the climb will be inaugurated in the morning and continue straight through the day.

Special arrangements have been made for parking spaces at the base of the hill, and half way up the slope.

Cars admitted to parking spaces at the latter point will be charged $10, including admission of occupants, while cars checked at rear of parking space will be charged $1. Cars will be checked near the entrance to the enclosure for 50 cents. The general admission to the hill will be a quarter. The climb itself will be under the rules and with the sanction of the American Automobile Association and the Federation of American Motorcycles.

The following is the list of events that will characterize this year's climb:

Classification

Class "A."—Open to any gasoline motor car (other than motor cars with solid tires, wheels 36 inches in diameter and over) which complies with the definition "stock car," this class to be run in the following divisions:

No. 1A. $4000 and over.
No. 2A. $3001 to $4000.
No. 3A. $2001 to $3000.
No. 4A. $1601 to $2000.
No. 5A. $1201 to $1600.
No. 6A. $801 to $1200.
No. 7A. $800 and under.
No. 8. Open to all makes of motorcycles.
No. 9. Free for all. Open to cars of all types and motive power.
No. 10. Amateur event. Owners to drive. Worcester County championship for trophy to be won three times in succession.

Class "B."—Open to any chassis of a gasoline car which is in accordance with the definition of a "stock chassis"; to be governed by the following table of piston displacement and minimum chassis weights:

	Piston Displacement in Cubic Inches	Minimum Weight in Pounds
No. 11B.	160 and under	1100
No. 12B,	161 to 230	1400
No. 13B,	231 to 300	1700
No. 14B.	301 to 450	2000
No. 15B,	451 to 600	2300
No. 16B,	601 to 750	2500

No car shall compete in any class above that to which its weight entitles it. No dead weight of any description shall be added to a car or attached thereto in any manner as ballast.

No. 17. Open to commercial cars and trucks. Details to be announced later.
No. 18. Free for all, gasoline stock cars only.
No. 19. Record of hill.
No. 20. Amateur event. Gasoline cars only; no limitation as to territory.

Events shall be open to stock cars only, except in events 8, 9 and 19.

Entry fee is $25 for each car in each event, except in events 8 and 10, where the entry fee shall be $10.

Entrance fee for amateurs, residents of Worcester County, to be $10 in any event.

Amateurs.—Amateurs may drive in any event provided the cars comply with the requirements of class and division. In such cases special prizes shall be offered "for amateurs only" in each class.

Entries close Wednesday, June 1, 1910.

The following information of general interest has been embodied in the circular sent out by the management:

Three or more entries will fill an event unless otherwise specified; if less, the event may be declared off.

The management will not be liable for injuries to or caused by contestants or machines used by them.

Before going to the starting line, entrants must present themselves to the committee for examination, to determine whether or not conditions are complied with.

The sprocket or ratio of gear may be changed.

Where car is driven with magneto, for which extra charge is made, the amount shall be added to the price of the car at time of entry. Imported cars must be entered at their selling price in this country.

Any manufacturer or agent entering a stock machine must agree to sell it at the entered price.

Each contestant, official, press representative and guest will be given a badge which will grant the wearer proper recognition at the contest.

All cars will be given a moving start of about two hundred feet.

After completing the climb, cars will not be permitted to return down the hill, but must keep on the first right, over Denny Hill to Leicester, and return via Main and Ludlow Streets.

When a car is entered for two or more events, the return must be made as quickly as possible, without exceeding speed laws and regulations, and the car be put in line for the next contest.

Should the day be too stormy for the successful climbing of the hill, the contest will take place the first suitable day following, at the same hour.

The committee in charge of the climb is Mr. John P. Coghlin, chairman; Mr. Daniel F. Gay, Mr. Milton C. Snyder, Mr. George D. Webb and Mr. Albert H. Inman. The official starter will be Mr. Frederick J. Wagner, and the timing apparatus in use during the event will be furnished and operated by Prof. D. L. Gallup of the Department of Gas Engineering at Worcester Polytechnic Institute.

Sprinklers in Department Stores

(National Fire Protection Association)

ONE of the subjects of the greatest commercial importance to-day is the loss of our natural and created resources by fire. Better care and better fire protection are imperative not only for large factories and mills housing great values, but for the mercantile and other buildings in our cities. The conflagration hazard of the latter could be greatly reduced by the universal installation of automatic sprinkler systems, obtaining their chief supply from the public waterworks system.

Conditions which allow a spread of fire from building to building exist in every city, town and village of this country, and are responsible for a considerable part of the annual fire waste, amounting last year to over $203,000,000.

Such extensive fires are a drain upon the resources of the people, paralyze business locally, and to the insurance companies bring enormous and unusual loss, which it is impossible for them to measure accurately in the rate, that the burden of the insurance tax may be equitably distributed.

There is no question but what city buildings must adjoin or be in close proximity, must have enormous windows in walls and skylights in roofs, and a majority of them must contain inflammable contents to a greater or less degree. The danger is enhanced as the buildings grow in height, the congestion of values increasing with each added story, as well as the inability of the fire department to reach all parts of the building with their hose streams. Eight-story buildings and "four-story fire departments" are frequently found in the same city. It should be realized that such portions of buildings as are beyond the reach of hose streams may be quite as much without fire protection as though located in the backwoods. Again, buildings have increased very much in area; many of them, located within the hearts of cities being of enormous expanse, and, perhaps the worst feature of all, with their numerous floors punctured at short intervals by unenclosed light, air and elevator shafts and stairways, thus allowing a fire to spread quickly from floor to floor. Such are most of the department stores, and many other retail and wholesale establishments, and they are properly termed "conflagration breeders."

Imagine a department store crowded from basement to sixth floor with an open stock of inflammable merchandise, piled high on counters and shelves, and festooned about windows and rooms for show purposes. Allow a fire to start therein, perhaps at a light-well, elevator or stairway in the centre of a large area floor, and at a distance from the street whence the fire department streams will not penetrate. Unless extinguished at the very start, that building is doomed, and nothing but a reservoir upset upon it will avail. There will even be cause for thanksgiving if the fire does not extend to adjacent buildings and develop into a conflagration, wiping out millions of dollars' worth of property, jeopardizing other business interests in the city, and perhaps causing much loss of life.

Certain barriers to the extension of fires do exist. Many fire departments are as efficient as they could well be made. They are a necessity and always will be, but experience has already shown their limitations. They are powerless with conflagrations, and in many cases a difference of one to five minutes in the time of their arrival determines whether or not the building and contents are a total loss.

The fact that a conflagration is not an annual occurrence in each city has caused the public to overlook the great waste caused by these spreading fires, or to forget it shortly after having been singed. That the fire department authorities, however, are perfectly aware of the danger, is shown by the amount of fire-fighting apparatus rushed out whenever an alarm is rung in from a congested district. Yet yearly millions upon millions of values are annihilated in buildings other than those in which the fires originate.

But a reforming influence is now appearing. The country's era of extravagance is passing. The merchant who in the past little thought what his insurance cost, and could be burned out and again resume business without great loss of trade, now scrutinizes every item of expense and dreads an interruption of business which will deflect his customers to competitors. Attention is therefore directed to a reduction of the fire cost in cities. "Fireproof" buildings, so called, have been erected, only to find that even the best types are not fireproof so long as they contain combustible contents, or are exposed by combustible buildings and inflammable stocks. Furthermore, it would be impracticable, within our day and generation, to tear down a city and replace it with these so-called "fireproof" structures. Neither can we do away with their combustible contents. So we should be quite at a loss were it not for another factor which is on the increase each year, namely, "The Automatic Sprinkler System."

This type of protection has been developed during the last thirty years. It was first applied to mills and workshops, and almost all such properties of prominence are now so protected. These are mostly isolated risks, and alone receive the benefits of such protection; but when a system is installed in a city, every property in the conflagration district profits.

Yet the reverse is true, and a sprinklered city risk is still quite insecure so long as exposed by unsprinklered neighbors, for the exposure in burning will likely open the sprinklers on all floors of the equipped building, thus overtaxing any water supplies and pipe sizes which it is feasible to provide. Yet such an equipment has already in several instances retarded a spreading fire sufficiently to prevent a conflagration, although the building itself suffered practically a total destruction.

We not only advocate the automatic protection of individual city risks, which is a growing custom, but also point out the great saving in fire cost, and the feasibility of the automatic sprinkler protection of *all* the buildings in the congested districts of cities; in other words, the practical elimination of the conflagration hazard. It is possible that underwriters may be able to hasten this work by allowing a special rate reduction upon a block when all the buildings therein are sprinklered.

Automatic sprinklers afford the chief means of pri-

vate fire protection, and possess a prompt penetrating power not obtainable by any other known means. They act instantly, long before any alarm can be given at the public fire box; locally at the seat of the fire, not being blinded by smoke into discharging large quantities of water where it is not needed; and forcibly when properly installed and fed by water under heavy pressure, filling the space with an irresistible deluge which not only quells the fire, but blankets the smoke, which would otherwise drift through the buildings, accomplishing an uncertain damage, impeding the exit of the inmates and the subsequent duties of watchman or fireman. This cannot be done by hose-stream service, and it is time the fact was realized. Of late it has been emphasized almost weekly by fires in several cities.

Already property owners in large numbers have installed sprinklers. Their buildings are dotted here and there all over the city maps. What is needed now is the filling in of the intermediate spaces. Shortly the community will call for it. If three-fourths of the buildings in a block were equipped, the portion not protected will be considered as a public menace, and public statutes may properly compel its equipment. Already they dictate as to the storage of oils and other extra inflammable substances, regulate construction, and compel the maintenance of standpipes, hose, fire-escapes, etc. Doubtless the landlord will in time consider the sprinkler system just as necessary a part of his fittings as the heating or lighting systems, and the municipality will have corps of inspectors to see that the protection is not impaired.

The public now looks to the underwriter for the sprinkler specifications, and the latter looks to the city water works system, as in most cases, the best possible source of water supply.

In past years there has been much abuse in the use of a water works connection. But times have changed. The day of lax specifications and inspection is passing. We must rely to a considerable extent upon the service received from the water works system, making much dependence upon private water supplies only when the public system lacks in pressure and volume.

We have little to fear in New England in regard to volume of water in central city districts, and the high service water system in your city of Worcester furnishes a pressure adequate in every respect for sprinkler protection in your highest structures.

The better class of sprinklered property is provided with more than one water supply for sprinklers, for the reason that it is often necessary to shut off the city system in localities in making repairs or changes, and as a second supply a private supply is provided.

There are three types of private water supply, commonly specified gravity tank, pressure tank, and pumps. Besides this, all sprinkler systems in cities should be provided with connections for attachment from public fire engines.

The gravity tank is a steel or wooden tank supported by a trestle on the roof of the building and elevated sufficiently to give adequate pressure on the sprinklers.

The pressure tank is very simple; nothing more than boiler shells located upon the upper floor or roof, filled two-thirds with water and the remainder with air compressed at seventy-five to one hundred pounds, which will expel all the water, the last leaving the tank at fifteen to twenty-five pounds pressure.

As these tanks can be filled with water from the public system, cleaned out and inspected as frequently as you like, there should be no objection to their connection to a sprinkler system which is also fed by the public water works.

Having protected the building from fire within, it is also necessary to protect it against fire from without, or, in other words, exposure fires, as the subject of exposure is a vital one. This protection may be obtained by providing all window openings with wire glass set in metal frames, by installing wood tin-clad shutters, or by an open sprinkler over each opening.

The open sprinkler is not an automatic device. The sprinklers are arranged on a system of piping controlled by valves which are opened in case of fire in adjoining property, throwing a water curtain over the entire side of the building, preventing fire from entering the windows and opening the sprinklers on the inside equipment, causing heavy water damage.

In the past, varying insurance regulations governing automatic sprinkler equipments were issued, but in 1896 the National Fire Protection Association, composed of the various boards and bureaus of this country and Canada, formulated uniform regulations governing the installation of automatic sprinkers, which are now in general use throughout the country.

As the equipments are, under average conditions, expected to allow the opening of and proper supply of water to at least forty sprinklers in any one fire, a considerable consumption of water may result. A system installed under these rules never fails except when the water for such a discharge is not forthcoming, due to weak water supplies, closed valves, or obstructed pipes, or when too great a number of heads are opened, due to quick-spreading fires, as a result of explosive or highly inflammable contents, draughts from vertical openings, blower systems, etc., or when the contents are piled so as to prevent a proper water discharge. The better supplied systems can discharge under sufficient pressure for efficient spray service at least a thousand gallons per minute, the equivalent of four standard hose streams.

These national regulations do away with individual fads and fancies, and place before the property-owners in black and white just what is, and is not, desired.

The use of sprinkler piping for anything but fire service should be prohibited. Circulation of water in them means the presence of objectionable sediment. Interior hose and domestic pipes should be on a separate metered connection.

The use of a proper alarm valve on each sprinkler system will be a positive check upon any circulation. Such a valve will eventually be considered a necessary part of every system.

The merit of automatic sprinkler installations in department stores is forcibly illustrated by a comparison of fires and losses in unsprinklered stores with the fires and losses in those which are sprinklered.

Below we give a list of several fires in unsprinklered department stores:

November, 1909, a fire in a three-story brick building protected only by private fire-hose. Cause of fire unknown. Loss, $65,000.

November, 1909, a fire started in elevator-shaft of

three-story brick building. No private protection. Loss, $150,000.

December, 1909, a fire in a five-story brick building, cause unknown. No private protection. Loss, $125,000.

December, 1909, a fire started in four and six-story brick building from breaking of incandescent electric light. No private protection. Four people killed and several seriously injured. Fire loss, $1,500,000.

December, 1909, show-window fire caused by ignition from defective electric wiring. No private protection. Loss, $40,000.

December, 1909, fire in store having no private protection. Damage, $100,000.

January, 1910, four of eleven shops belonging to one company destroyed. No private protection. Loss, $500,000.

The above seven fires in unsprinklered department stores show an aggregate loss of $2,480,000, or an average loss of $355,000 per fire.

As compared with this, the following fires in sprinklered department stores in one of the largest cities of this country are of interest:

February, 1898, a fire in drapery about a painting set by defective electric light wiring. Two sprinklers opened, holding the fire. Total insurance, $544,000. Insurance loss, $4200.

October, 1898, fire caused by defective electric light wiring in show-window. One sprinkler opened, extinguishing the fire with aid of fire-pails. No insurance loss.

November, 1899, fire in building across the street broke windows in this store, and set fire to the stock. Opened thirty sprinklers on various floors. Cause, exposure fire. Total insurance, $1,500,000. Mostly to building. Exposure fire.

November, 1899, fire in other buildings was communicated to department store through a window. Fifteen sprinklers opened. Total insurance, $1,300,000. Fire insurance loss, $38,000. Exposure fire.

March, 1900, fire in other buildings was communicated to department store through windows. Fifty-three sprinklers opened on various floors. Total insurance, $800,000. Fire insurance loss, $115,000. Exposure fire.

December, 1900, fire occurred in show-windows, which opened twenty-eight sprinklers in and around windows, extinguishing the fire with the help of a hose stream. Fire was caused by the window-dresser smoking. Total insurance, $1,950,000. Insurance loss, $4500.

July, 1902, a slight fire in a show-window caused by electric lighting system. One sprinkler opened, extinguishing the fire before the fire department arrived. Total insurance, $405,000. No insurance loss.

December, 1902, a slight fire in box of sweepings, caused by spontaneous ignition. Fire was extinguished by two sprinklers before fire department arrived. Total insurance, $400,000. No insurance loss.

May, 1903, fire started from defective electric light wiring, setting fire to woodwork. One sprinkler opened, extinguishing the fire. Total insurance, $275,000. No insurance loss.

December, 1903, fire started in store restaurant caused by boiling over of lard in a kettle. Fire was extinguished by seven sprinklers, three streams from standpipe hose and the aid of public fire department. Total insurance, $2,600,000. Insurance loss, none.

December, 1904, a fire was discovered in the waste-paper vault in basement, three sprinklers opened, extinguishing the fire with the aid of standpipe hose and chemical extinguishers. Total insurance, $3,000,000. No insurance loss.

October, 1907, a fire was discovered in a waste-paper chute. Nineteen sprinklers opened, extinguishing the fire. Total insurance, $3,000,000. No insurance loss.

November, 1907, a fire in waste-paper chute. One sprinkler opened, extinguishing the fire, with the aid of public fire department and standpipe hose. Total insurance, $3,750,000. No insurance loss.

June, 1908, a fire in basement in pile of rubbish. Opened one sprinkler, which extinguished the fire, with the help of the public fire department. Total insurance, $305,000. No insurance loss.

October, 1909, a fire in waste-paper chute. Opened two sprinklers, which extinguished the fire, with the aid of hose streams from the standpipe. Total insurance, $3,000,000. No insurance loss.

The combined loss of these fifteen fires amounted to $186,200, of which $177,500 was occasioned by three exposure fires. The total value of insured property was fully $20,000,000.

The average loss, including the exposure fires, was $11,800 per fire, while the average loss of the twelve fires which originated within the department stores was only $725 per fire, with an average valuation of about one and three-fourths millions per store.

These figures speak for themselves, and show conclusively the advantage gained when these department stores are equipped with sprinklers.

In the face of such results, is it not apparent that there is a neglect of duty to the community where these large buildings are allowed to continue as "conflagration breeders," when practical means are available at reasonable cost which will almost entirely eliminate the chance of serious loss?

The community is awakening to the importance of this work, and the public is beginning to realize that it is high time something was done to reduce the enormous fire waste which threatens to undermine the finances of the nation.

It is a large task, to be sure, and will take time, but each additional city risk which is sprinklered and protected against exposure means that one more danger-spot has been made safe and the chance for heavy loss by fire in that locality has been eliminated.

What Portland Spends

The city of Portland, Me., believes in advertising, as evidenced by the fact that the Board of Trade collected and spent last year for this purpose over $5000, in addition to which there were distributed about 8700 large booklets, 10,000 or more small ones, while illustrated advertisements were carried in twenty-one leading newspapers of the country and ten national magazines.

Bellingham's Efforts

Bellingham, Wash., through its Board of Trade, will make renewed efforts the present year to induce manufacturers to locate there. The city and surrounding country have undeveloped resources, which would provide employment and homes for many thousands if properly exploited, it is claimed.

Commission Government

How it Works Out in Our Neighboring City of Haverhill, Told by the Energetic Secretary of its Board of Trade, Albert M. Child

Commission form of government, so called, is a misnomer as far as the writer has been able to ascertain, except when applied to the government of Chelsea, Mass. The name was correctly applied to the Galveston government inaugurated after the disaster. The commission was appointed by the Governor at that time, but that act was declared unconstitutional; later the same men were elected by the people, and that is the mode of choosing the officials in all other places where new charters have been adopted. Still the name sticks.

Under our old charter we had a mayor at a salary of $2000, seven aldermen (one from each ward), and fourteen councilmen serving without compensation. For many years they were unable to bring the running expenses down to the twelve-dollar limit allowed by the Massachusetts statute. Consequently, the financial condition of the city was in such a state during the year 1908 that the citizens awoke to the fact that something must be done. Some of the most earnest and patriotic people of the city got together and formed a civic association, studied the problem and decided that the remedy lay in obtaining a modern charter, doing away with the cumbersome, unwieldy two-board form, wherein it was utterly impossible to place the responsibility for any unsatisfactory move.

ALBERT M. CHILD

The essential features of the charter finally adopted were:

Party designations and ward lines abolished.

Government to consist of mayor and four aldermen, with two-year terms for mayor and two aldermen, one-year term for two aldermen, first election, and two-year terms thereafter; salary of mayor $2500, aldermen $1800.

By obtaining the signatures of twenty-five legal voters any citizen can become a candidate at the primaries, and the two receiving the most votes for each office are candidates at the election; thus, the possibility of any man holding office against the desires of two-thirds of the voters is eliminated.

Referendum and recall by petition of twenty-five per cent. of the voters.

At first election five first-class men were chosen, and at second the two whose terms were completed defeated their opponents overwhelmingly, thus demonstrating that the people were satisfied.

The City Council divides the work as follows: Alderman Desmond, a civil engineer of large experience, has charge of streets, sidewalks and sewers.

Alderman Harris, experienced builder, is the head of public property, having charge of all buildings owned by the city.

Alderman Killam, formerly cashier of a large national bank, looks after accounting, printing, etc.

Alderman Bean, a shoe-worker of first-class character and ability, is at the head of the fire, police and charity departments. The Mayor, one of the leading business men of the city, acts as an overseer of the whole, and all devote practically the whole of their time to the city. Every move is authorized by vote of the Council and carried out as outlined above.

Comparison before and after: For the five years previous to the adoption of the new charter the running expenses exceeded the twelve-dollar limit by an average of approximately $70,000 each year; to be sure, one of those years was a no-license year, and a small allowance should be made on the average.

The first city council under the new form ran the city within the twelve-dollar limit, and had a balance of about $7000. How? By getting one dollar's worth for every dollar spent.

By competitive bids whenever possible.

By purchasing at wholesale to a large extent.

When more than one department used the same article by buying in one order.

By studying and planning the season's work in the spring, with economical management in view.

By doing away with "log rolling" and considering the city as a whole.

By having an alderman over each department "on the job" all the time, and held responsible for the work of said department.

By paying the members of the City Council enough so that they will worry about the city's business instead of their own.

Most permanent work is paid for by bond issue, and the bonds are $1000 each, so that there is likely to be a balance on each job for any amount up to nearly $1000. Again, in case of fire, substantial sums are sometimes received from insurance companies, and real estate is frequently disposed of, so that the amount accumulated in these and similar ways will annually total many thousand dollars; formerly the most of this money was turned into the contingent fund as receipts and used for current expenses. This practice is, of course, contrary to the intent of the statute, but it was done here, and probably now is being done in many cities.

The new charter calls for an annual inspection of all accounts and a public report by an outside expert

accountant. A separate account, called the reserve fund, is kept, into which all such receipts and balances must be turned; thus the juggling of finances is a thing of the past, and the people may know the facts regarding the financial success of the management of the city's business, whereas formerly they only thought they knew.

Under the old form, expenses seemed to be increasing faster than the receipts; unless a change was made, high valuations and tax rates were inevitable; capitalists were becoming afraid to invest in real estate and Haverhill was becoming handicapped.

Under the new form, confidence is restored; there is no fear of over-valuations or high tax rate, and graft is not thought of, even by its enemies.

Permanent construction of streets and sidewalks is being carried on to an extent never before contemplated; smooth pavements and granolithic sidewalks will soon be the rule instead of the exception in the central part of the city; and by co-operation with the State Highway Commission, macadam roads will in 1911 connect us with other cities in every direction.

One of the best and largest high school buildings in the State will be completed this year, and steps are now being taken to establish an industrial school and a branch of the Massachusetts College here. The desire of the school board (consisting of four prominent citizens) and the City Council is to place the educational advantages of Haverhill on a plane as high as can be attained by modern knowledge, able and intelligent management, and as liberal an expenditure of money as may be consistent.

And so we could go on with many departments, for the same care is taken in all, but these illustrations are perhaps all that are necessary to bring out the comparison between the management of Haverhill's municipal business under a modern charter and under the old. The reader who is familiar with conditions in other cities may profit by our experience, for it must be admitted by any fair-minded man that the same men, when devoting all of their time and energies to any business, will be more successful than when devoting a very small part of the same. Men should not be expected to do for nothing what deserves liberal remuneration. We usually get what we pay for, and Haverhill has proven no exception. We have great faith in our new system and we have supreme confidence in our future prosperity, largely due to Haverhill's new charter.

Ninety-six Hours or Forty-eight?

The shippers of New England are opposing, and this Board has, so far as lay in its power, resisted the attempts of the railroads of this country to impose on this section of the United States the uniform code of demurrage rules, so called. Mr. E. M. Woodward, vice-president of this Board, and chairman of the Committee on Transportation, appeared at the hearing before the Boston Chamber of Commerce last month in opposition to the proposed change, and it was the unanimous opinion of all present at that time that New England ought not to submit to the imposition of these rules without a struggle.

The effect of the proposed uniform code will be to reduce the free time from ninety-six to forty-eight hours, and while there are some shippers that can unload their cars in two days, there are others that will find such a rule quite an exaction.

The great objection seems to be if the rule works a hardship it will be difficult if not impossible to abrogate it. The switching time which was formerly allowed to industrial railroads or to industries which do their own shipping, is cut off, and there are many other restrictions which time may prove to be hardships to the industrial or shipping interests affected.

In Chicago the grain shippers obtained a temporary injunction in the Federal Court to delay the enforcement of this code in so far as it related to grain, and in this section the grain and flour men seem to be a unit in opposition to it. The court in Chicago later dissolved the injunction, so that the Western grain men are now powerless, but New England, thanks to a state law in Connecticut, is still protected against the proposed reduction, and the sentiment here so far manifested, not only by the grain merchants but by many other shippers, is to the effect that every effort possible ought to be put forth to prevent the rule being put into effect here.

It is coming to be more and more realized that the laws of the Medes and Persians are elastic bands when compared with the rules of the Interstate Commerce Commission, particularly when said rules are backed up by the National Association of Railway Commissioners, as is the case in this instance.

The proposed reduction in free time may, as its sponsors claim, work well, particularly if the railroads give the consignee the benefit of the credits accruing from unloading cars inside of the proposed free time, but if the rule once established should work badly that would be an equine of another hue.

It is probably not too much to assume that a rule that has back of it all the force of the American Railway Association, the various State commissions, which helped frame it, and finally the Interstate Commerce Commission itself, will not be easily overturned, no matter how it works.

The dividing line between the State commissions and the Interstate Commission on questions of demurrage has not yet been clearly drawn by the courts, but the evident tendency of the times is to repose more and more power in the national body.

Massachusetts has found it difficult but not impossible to secure a modification of an objectionable rule, when made by its own Commission, and it may be that it will find the National Commission equally responsive. But until the rule has had a thorough and more protracted trial generally, is it not the part of wisdom for the merchants, manufacturers, lumbermen, exporters and other receivers of freight in this section to make haste slowly in adopting this radical curtailment in the privileges they now enjoy?

This, at any rate, was the feeling of the gentlemen assembled at Boston, and in order to "make assurance doubly sure and take a bond of fate," they appointed a committee of three men to draft a bill to be presented to our State Legislature to regulate the number of hours for the demurrage of cars, and a further committee of one man from each state to confer with the proper committee relative to the maintenance of the present ninety-six-hour demurrage rule.

Our Annual Banquet

An Occasion that will Long be Remembered by the 1200 People Present was the Dinner, April 19th, in Mechanics Hall, by the Worcester Board of Trade

WITH 700 people on the floor and 500 more in the galleries, the thirty-fifth annual banquet of the Worcester Board of Trade in Mechanics Hall, on the evening of April 19th—Patriots' Day—will go down in history as the largest attended and most successful social event in the history of this organization.

The hall was beautifully decorated, and the supper served by Col. George A. Keeler, proprietor of the Bay State House, was a delight from an epicurean standpoint, and was served in a manner that will long stand as a model in this community.

There were 15,000 pieces of silver, china and glass used in serving the meal, and every detail of the dinner went off like clock work. Col. Keeler has had a very wide experience in serving large dinner parties, and has catered to several of the leading organizations of this city in a highly satisfactory manner since he came to Worcester, but this was his first opportunity to show what he could do with a company as large as this, and no small share of the success of the occasion is due to the untiring, well directed and conscientious efforts he put forth. To him and to his entire corps of assistants the thanks of this organization are due.

The addresses that marked the dinner will long be remembered by all present. From the opening remarks by the President to the masterly oration on "Socialism" by Senator Bailey, which brought the festivities to a close, they were imbued with vigor, patriotism and a high moral emphasis and appeal rare even in celebrations of this kind.

The banquet itself—a great Massachusetts holiday—a day set apart from all other days by the blood of two generations spilt on the altar of liberty, made for high thinking and noble sentiments, and splendidly did the men who addressed the Board and its guests respond to the call of the hour. If the Worcester Board of Trade did nothing else during the whole year, this banquet would have proven its usefulness, its right to live, and its profound influence on our citizenship.

The tables were beautifully decorated for the occasion with roses and cut-flowers from the Worcester Conservatories, Leonard C. Midgley, proprietor, while the stage on which the speakers sat was a perfect picture, with Old Glory covering the face of the organ back of the speakers' table, and at either end the State flags of Massachusetts and Texas. The latter, kindly loaned for the occasion by the authorities of that State, was a beautiful silk banner, and was an object of great interest and admiration. The Massachusetts flag, equally beautiful, was loaned by Capt. H. H. Warren of this city.

An American eagle in bronze fronted the platform, and on the front of the west gallery blazed an electric seal of Worcester, inside of which was the monogram of the Worcester Board of Trade—W. B. T. This was the artistic handiwork of L. R. Paige.

Prior to the banquet there was a reception in Washburn Hall, when Senator Bailey and the other distinguished guests met several hundred of Worcester's business men most happily. Truda's Orchestra played for this reception very acceptably, as it did during the dinner proper. The musical features of the evening were not the least enjoyable contributions to the pleasure of the occasion. The Glee Club sang splendidly, as it always does, and the choruses from popular songs introduced this year for the first time proved a delightful innovation.

The menu cards this year were a marked departure from those heretofore in use, and many were the compliments bestowed on Mr. Oliver B. Wood, the printer, and Mr. John C. Woodbury, the artist who made the beautiful luxagravure of Senator Bailey, which adorned its pages. The book was printed on imported Japanese paper, and from cover to cover it breathed forth artistic excellence.

Too much credit cannot be bestowed upon the Committee on Meetings and Receptions, and particularly upon the Chairman, Mr. Arthur C. Comins, for the success of the occasion. The multitudinous details for such a dinner involve an immense amount of hard work, and from the outset Mr. Comins gave the arrangements his close personal attention. His fellow members on the committee also labored assiduously to make the affair a success, and to him and to them the organization is deeply indebted.

It would be impossible to portray in cold type the enthusiasm that characterized the gathering, but it is safe to say that our distinguished guest from the South, when the 700 men present arose to their feet to the tune of Dixie and gave him the ovation they did, must have felt that the stories he had heard about New England coldness were at least exaggerated.

Senator Bailey's address in full furnishes the initial article for this number of the Magazine. The remaining speeches of the evening are given herewith:

Address of the President

In opening the post-prandial exercises the President said:

"Members of the Worcester Board of Trade and Guests:

"This is Patriots' Day. We are loyal to the Union and to the ancient Commonwealth of Massachusetts.

"Two and a quarter centuries ago, the King of England sent Sir Edmund Andros to take away the charter of our liberties, to abolish our legislature, and to make this royal governor the absolute despot over our people. For a while Massachusetts endured the heaping up of insults and oppression, until, in the spring of 1689, her wrath rose in a storm, and Massachusetts seized Sir Edmund Andros, sent him back to England, and resumed her time-honored condition of a self-governing province.

"Just eighty-six years later came the culmination of the tyranny and oppression showered upon our people by an insane king and a foolish ministry. On April 19, 1775, the embattled farmers fired the shot heard 'round the world, and began with victory the terrible struggle for American independence.

"And strangely enough, just eighty-six years later, the first Massachusetts blood was shed in the great war for the Union, on April 19, 1861.

"Truly Massachusetts has a history. She has a glorious past, and splendid present, and a future of brilliant promise. If there is any law of destiny which

Hon. Joseph Walker

fixes the eighty-six-year period in Massachusetts affairs, we may well wonder what important event is surely to happen on April 19, 1947. Whatever it is, may it be in keeping with our glorious traditions!

"But this is not a patriotic time in Massachusetts alone. For seventy-four years ago to-day Gen. Sam Houston, at the head of the little Texan army, started on his march to meet the Mexicans under Santa Anna, and two days later came that whirlwind attack which took an empire from Mexico, and made the Lone Star flag the emblem of an independent nation.

"It is the especial function of the Board of Trade to foster civic pride in the city of Worcester.

"There is a certain type of man who thinks he appears very smart in talking against his own country or his own city, or the organization to which he belongs. Such a man will say that the American enjoys no liberty to compare with the liberty of the Englishman. He will say that Worcester is an overgrown country town. Or that the Board of Trade never does anything.

"Not one of these sayings is true, yet how often have we heard all of them! Ever since I was a small boy I have heard croakers lament that Worcester is an overgrown country town. It wasn't true then, it isn't true now, and never will be true again. If you ever hear any fellow say that, please rebuke him as he deserves.

"Worcester is the second city in the State and the third in New England in population and in influence. It manufactures more different kinds of products than any other city in the United States, and in several lines it has the largest works in the world. It has been called the ideal industrial city. It is not only an industrial city, but an ideal city. It is not merely a Birmingham, but an Oxford as well. For Worcester has four institutions of the higher learning besides its regular school system and preparatory schools of the very highest standing.

"And this is not all. The city is famous the world over as the home of the Worcester Music Festival. And its celebrity in the realm of music is sure to be balanced in the realm of art, by reason of the fact that the Worcester Art Museum is one of the most liberally endowed of all similar institutions on this side of the Atlantic.

"And so I say that Worcester is an ideal city. It is a good place to live in.

"And now I wish briefly to pay my respects to the misinformed man who complains that the Board of Trade never does anything. Well, if he is here to-night he will be compelled to admit at least that it has an annual banquet. And I submit that if it did nothing else, the bringing together of such a gathering of citizens, with the attendance of men of such eminence, would be sufficient reason for its continued life.

"But the Board of Trade does a great deal for Worcester. I am not going to tell you how, for most of you know. Those who don't know, I refer respectfully to the pages of the acknowledged finest publication issued by any business organization in the country—the Worcester Magazine.

"In addition to its other superlative distinctions, for two years Worcester has had the honor of being the largest dry town in the world. And under Mayor Logan it has had the further credit of being the driest dry town. After May 1, we expect that Mayor Logan will make it the best wet town. His growing majorities show how well satisfied his fellow citizens are that even the manager of a trust knows how to handle the affairs of a municipal corporation—Mayor Logan."

The Mayor's Address

His Honor the Mayor was given an ovation as he arose, the audience arising to its feet and cheering. As soon as quiet could be restored he said:

"In behalf of this goodly city, over whose interests for the time being I have the honor to preside, I extend to you all a most cordial welcome to this gathering to-night.

"Permit me to extend a special welcome to the honored stranger who is within our gates, whose home is in that far away Empire State, which he so honorably serves in the Senate of the United States.

"We appreciate his coming so many miles to add to our pleasure on this the great anniversary day of the conflict which made secure the civil liberty of two hem-

Hon. James Logan, Mayor

ispheres, for on that day, so many years ago, both America and England were saved.

"The city of Worcester is honored by your presence with us to-night, and she welcomes you with a full heart and outstretched hand.

"It is not to be expected that on this occasion the Mayor will make any extended remarks—you are not gathered here to-night to listen to him.

"In this changing world, 135 years ago is a long time, as men count time, even in the lives of nations, and marvelous have been the changes which have marked the great highway of human progress since that never-to-be-forgotten day in April, 1775, the anniversary of which we celebrate to-night.

"The heart of every true American must swell with pride as he contemplates the glories of the past 135 years, which dates from that day when the shot was fired that was heard around the world, the echo of which is reverberating even now in distant lands that will some day enjoy the blessings of freedom, because of the stand made that day, so long ago, by the minutemen at Concord bridge.

"But the true purpose of such an anniversary gathering as this will be altogether lost if it shall fail to inspire us with a deeper and purer Americanism, and a stronger love for the principles represented by the stars and stripes which for 133 years have been the emblem of this nation. Beneath its sheltering folds the weakest may seek and find protection, and the strongest and most unruly must be taught obedience to law.

"That flag may be of finest silk from the Orient, or of common cotton from your great State, but it is not what it is made of, but what it stands for, that makes it dear to us. And as the years roll on, with the advance of science, the astronomer will bring to our sight out of the azure depths, new stars not visible to the naked eye, so with the prophetic vision we look into the far future of this great nation and behold new stars in the blue field of our beloved flag representing commonwealths yet unborn."

Mr. Tatman then said:

"It would seem that no one could better speak for Massachusetts than the Massachusetts speaker. We have not the pleasure of the Governor's company to-night, but the Worcester Board of Trade is always up-to-date, and has an eye to the future. I am sure that we are not very much ahead of time in inviting a response in behalf of the Commonwealth by the Hon. Joseph Walker."

Hon. Charles G. Washburn

The Speaker of the House

The Speaker of the House of Representatives was heartily welcomed. He said:

"It is a great honor and a great pleasure for me on this occasion to respond for the old Commonwealth of Massachusetts. The Legislature of Massachusetts is the oldest representative body in the world, with the one exception of the British Parliament. It has stood the test for a century and a quarter. Under it we have had government by the people, and on the whole, I believe we have had good government.

"The longer I have been a member of the Massachusetts Legislature, the greater has become my respect for its rules and for its methods. Here in Massachusetts not only is the right of petition safeguarded, but every petition presented to the Legislature is given consideration. The petition of a citizen, no matter how humble he may be, no matter how little influence he may have, is treated with the same consideration as that of the most powerful individual or corporation.

"It is referred to the appropriate committee. Upon request a public hearing is given, at which the petitioner may present his case and those in opposition may be heard. No petition is smothered or turned down in the secrecy of the committee-room, and herein Massachusetts differs in practice, I think, from every other State in the Union, and from the nation. Every petition is reported back to the Legislature, and is there acted upon by all the representatives of the people in open session.

"Several things result from this method of doing business. In the first place, it limits the power of the presiding officers of the House and Senate. As it is, the Speaker has power and influence enough. He appoints committees and determines what matters shall go to each committee. This in itself is a great power. He cannot in Massachusetts further determine what matters shall be acted upon and reported by committees, for, as I have said, all matters are reported upon either

favorably or unfavorably to the Legislature itself, and the Legislature in open session advances or kills them.

"We have all been astonished at the power to which the Speaker of the national House of Representatives has attained, against which power the body has recently rebelled. I, for one, prefer the Massachusetts method. I believe that another result is the active interest of so many public spirited citizens in legislative matters on Beacon Hill. They know that matters in which they are interested will be considered.

"We are afflicted, to be sure, with many crank propositions, but on the other hand, we are aided by the presentation of many genuine reforms. It is due to this fact in part that Massachusetts has led in so many reforms which have been later adopted by other States of the Union and by the nation itself. It is also due to the fact that every petition receives consideration that our sessions are so long.

"We receive from 1500 to 2000 petitions at every session, and as you know, it requires nearly six months of every year to dispose of them. I firmly believe, however, that our practice is well worth all the time and money that it takes. I like the free, open and above-board methods of the Massachusetts Legislature, and I trust that the day is far distant when the pressure of business will require us to modify them.

"I believe that in Massachusetts we have the best and the most democratic form of representative government in the world. But no form of government, however good, will make up for the lack of good men to operate it. Here is where lies the duty of the citizen. His duty is simple and prosaic, but it is of immense importance in a government by the people.

"It is the duty of the citizen to see to it that we have in our halls of legislation the best intellect and the highest character which the community can produce. How are the great and difficult questions which to-day confront every legislative assembly to be solved aright, unless we can command the service of men of ability, and, above all, of men of character? We must have men who can be trusted, men of independence of thought and action, men who have the backbone to do the right rather than the popular thing, men who stand for no special interest and for no special class, men who place the public good high above party advantage or their own political ambitions.

"We need men who will sacrifice themselves for their country, who are not too tender of their political future. There are plenty of men in this country, in this Commonwealth—yes, at this table—who in time of their country's need would willingly sacrifice their physical lives for their country.

"What we need in politics are more men who will sacrifice their political lives for their country. I believe that we have come to a time, thank God, when he who would save his political life will lose it, and when he who would lose his political life for what he thinks to be right, will save it."

"The next speaker," said Mr. Tatman, "is one of the most loyal and helpful members of the Worcester Board of Trade. He is a learned lawyer, a successful manufacturer, a distinguished educator and an experienced legislator—our Representative in Congress, the Hon. Charles G. Washburn."

After the applause which greeted his name had subsided, Congressman Washburn responded as follows:

Remarks of Congressman Washburn

"I have often said, and I say it again tonight, that if the Board of Trade should attempt nothing more than to ensure each year a meeting like this, it would abundantly justify its existence. In these days of stressful pressure, it is of enormous advantage to get together and into close and sympathetic contact the varied forces of the industrial, commercial and professional life of a growing and a prosperous city like this.

"When I had the honor to call with the other members of your committee upon Senator Bailey to invite him to be present this evening, I told him that he would meet here the men who are the leaders of thought and action in this community, and that he would have as fine an audience as could be found in the New England States. Most abundantly has this prediction been fulfilled, and I feel great pride in the fact that you are my constituents and that I am your Representative in Congress. We often hear men say for themselves, their communities, their political parties, that they are looking forward and not backward, as if progress of any kind were better than no progress at all. Like all general observations, this needs some qualification, and I sometimes think that we can profitably spend a little time in reviewing the past, and noting from what small beginnings the great accomplishments of these later days have come. Had I the time, this evening, I should like to take you back to those earlier and simpler days in this community when the good women of the town were admonished to save their rags in order that the weekly paper might be printed, and to the days of the crude machinery in our small mills, kept in motion by the waters of Mill Brook as it made its progress to the sea. We might dwell with profit upon the patriotic labors of those enterprising men of fifty years ago which made possible this magnificent temple, dedicated to the mechanics of Worcester. It was built when our numbers were scarcely 20,000, and has remained reasonably adequate to the demands of a population seven-fold as great. These walls have been the silent witnesses of every great occasion of joy and of sorrow which has called together our people during the eventful half century which has passed.

"I sometimes wonder if we of this generation are as strong of purpose and hard of fibre as those of the earlier days. I will mention here what I said a few days ago to a friend of mine, now sitting at this table, that conscious as we all are of the spirit of unrest now prevailing throughout the country, we do not, as I view it, look deep enough for the cause. I have had a feeling myself that it is due in some measure at least to the fact that the conduct of our affairs, both in the nation and in state, has fallen into the hands of a new generation of men, and a generation bred in a different school from that of their predecessors, and we are not yet adjusted to the change.

"The effect of the Civil War upon the character of those men engaged in it, both on the field of battle and at home, on both sides, has in my opinion been too little considered in estimating the great influences which have been shaping the destinies of the Republic. That war on both sides was fought by boys in years, who, in the terrible experiences of those weary months of strife, became men in experience and in wisdom. They returned to the pursuits of civil life still young in years, but old in discipline. The principles they

fought for, they lived with. Their convictions were deep-seated, and left no room for compromise, and were carried into the legislative life of the nation. That generation has now nearly passed away, and its controlling influence in our civic and political life has been for the past few years gradually weakening. We of this day have not been bred in so severe a school. We are confronted with problems of a different sort, but none the less difficult, and if we are to succeed we must meet them with the courage, the determination, and the fidelity to principle which were shown by the generation now rapidly passing off the stage of human activity.

"I notice the tendency today, in my opinion most harmful, to view with suspicion, at least, our public men. There seems to be a disposition to consider them guilty of almost any offence until they are proven innocent. Such an atmosphere is not calculated either to maintain a high standard of public service or to create a discriminating judgment of such service on the part of the people. Those of us who are in Congress are dependent upon such bodies as this for suggestion and advice, to which we are glad to respond, but let it be intelligently made after full knowledge of the facts, and not ill-considered, for then it ceases to be helpful. My short experience has increased rather than diminished my respect for the work done in Congress. The great appropriation bills necessary to the operation of the machinery of the government are scrutinized with great care. The legislation essential to adequate progress in the many fields of present-day activity of the national government is enacted in reasonably satisfactory form, and we rarely hear of any maladministration of any of the departments. If there is much room for improvement, there is also much cause for congratulation upon what has been and is being accomplished.

"I listened with interest to what Speaker Walker said in regard to the Massachusetts Legislature. I have myself been honored by membership in both branches of that body. I share with the Speaker his admiration for the manner in which business is transacted there, but there are good reasons why it is not practicable to adopt the same method in Congress. About 30,000 bills are introduced in every Congress. If every one were considered for an hour it would consume about ten years of eight-hour days, and we are not allowed to work any longer in the District of Columbia, although personally I am not able always to observe the law. I suppose you would not regard it unreasonable if, as your Representative, I were to appropriate twenty minutes of the time of the House every month in debate. This would amount to two hours in a session of six months. The House averages to sit about five hours a day, and there are, therefore, available for the transaction of business in a six-months session about nine hundred hours. If every member of Congress were to speak two hours during the session, seven hundred and eighty-two hours of time would be consumed, leaving one hundred and eighteen hours for the transaction of other business. A mere statement of the conditions is an adequate demonstration of the fact that it is utterly impossible to give consideration to more than a limited number of bills introduced in Congress.

"I should be glad, if the time permitted, to speak at some length of the work now being done in Congress. It is a striking and interesting fact that most of our time is taken up with the consideration of questions closely related to the commercial interests of the nation. The railroad bill, so called, now pending in both Houses of Congress vitally concerns the welfare of every man, woman and child in the United States, and the continued prosperity of the great shipping points of the country as well as every hamlet in the land. Not only is it true that our legislation is most largely given to matters affecting the material welfare of our people, but the courts are largely occupied in construing questions which arise in connection with legislation of this character. It is only recently that the Supreme Court heard two great cases involving the construction of the Sherman Anti-trust Act, as applied to two of our greatest industrial organizations. The decisions, when rendered, will be accepted by the American people as just and final, imbued as we are with the conviction so essential to the prosperity of any government that "Liberty is obedience to law."

In this connection I might add that the operation of the three great branches of government, the executive, the judicial, and the legislative, is a lasting monument to the wisdom of the fathers, who, utterly unconscious of the great and rapid development of the country in directions then not dreamed of, wrote the Constitution of the United States. Laws may be passed by Congress, but their ultimate interpretation is left with the courts, and until that interpretation is forthcoming, the exact scope of a law cannot be ascertained. This has been strikingly illustrated in the construction of the Interstate Commerce Act of 1887, and of the Sherman Anti-trust Act of 1890. In both cases the legislation passed by Congress received a construction by the courts which made both laws widely different from what those who enacted them understood them to be.

"Mr. President, I cannot longer trespass upon the patience of this great audience, glad as I should be to do so. I never spoke, save on one occasion, so long as I wanted to, and then when I had completed, no one was left in the hall. I suppose that men would disagree as to what, on the whole, is the most impressive experience through which the senses can pass. Some would find this in some great natural convulsion, the ocean lashed to fury under the disturbing influences of a storm; others would be more impressed by the more peaceful and majestic scenes in nature, a snow-capped mountain, massive yet graceful and silent, projected in outline against the evening sky; but I am inclined to the opinion that the human emotions are most responsive when subject to the spell of some great orator, who, at will, can impart to a sympathetic audience every feeling of which the human heart is capable. This gift is God-given and can never be acquired in its full perfection through any artificial means. It is possessed in great measure by the distinguished guest of the evening, to whom I am now most happy to yield."

The Fourth at Springfield

The morning military parade at Springfield this year will be the big feature of the Fourth of July celebration, according to the decision of the Executive Committee of the Independence Day Association. Besides the local military organizations bodies of men will be in line representing the troops of the United States at different periods of their history and also the forces of other powers.

Following the disbanding of this parade at noon, all the bands taking part will give a concert in Court Square, and there will be singing led by a trained chorus.

The Annual Meeting

Five New Directors Chosen to Serve for Four Years. President, Secretary, and Committee Chairmen Submit Reports. Timely and Interesting Discussions of Themes Close to Worcester's Heart

THE date of the annual meeting of the Worcester Board of Trade, as fixed by the constitution, fell this year on a legal holiday, the 19th of April, so that it was necessary to postpone it one week. The evening of April 26th was anything but propitious. Jupiter Pluvius was in a particularly generous mood and the rain literally fell in torrents, but that fact did not deter the members from turning out, and the meeting proved one of the most interesting and successful in the history of the organization.

Following the reading of the various reports and the election of officers, there was a spirited and timely discussion on two matters that are close to the hearts of many men in Worcester.

While it has been realized for a long time that the old Union Passenger Station, now being demolished, had outlived its usefulness, the structure itself contained many architectural attractions that rendered its demolition a source of profound regret. Particularly true is this of the tower that forms its chief ornament. No visitor to Worcester, whether he has come here by train or trolley or automobile, has failed to remark its well proportioned lines and its graceful and impressive dignity. From every possible viewpoint this tower stands out commandingly in the landscape, and its charm and amenity to its surroundings have served not only to beautify what would otherwise have been an ugly and an exceedingly material edifice, but have formed a picture that has delighted the eye of every architect that has beheld it.

CHARLES T. TATMAN
President

In the light of these facts many of the people of Worcester, and they perhaps not among our most æsthetic, have viewed with sincere sorrow its approaching destruction.

The subject has been discussed by the Directors of this Board at several of their recent meetings, and at the annual meeting it was brought up by Mr. Herman Schervee, who voiced his belief that the matter was one that ought to be taken up by this organization in sober earnest, to see if the city will not take the necessary steps to buy the land and preserve the tower.

It was brought out in the discussion that followed that the lines of Washington Square, as they at present exist, are to be materially altered when the new station is erected. The railroad owns the land well out into the square, in front of the present station, and the railroad officials have informed Mr. Charles L. Gates, a director of this Board, that every foot of land owned by the railroad east of Grafton Street will be required for tracks, yards and freight station purposes within a comparatively short time.

If the tower is to be preserved, therefore, it will be necessary for the city to purchase a considerable parcel of land about it in order that we may ensure its having fitting and appropriate surroundings. It is intended to beautify the square greatly when the new station is completed, including a handsome garden plot in the centre. If, in addition to its other beauties, this square can, when completed, be made to boast this unique and unusual ornament, Worcester will, through its possession, stand out distinct among all American cities. The approach, then, to our beautiful new depot with the Shrewsbury Street boulevard stretching away in the distance, will furnish a setting as inspiring as that possessed by many European cities.

It is confessed that American cities suffer from the surroundings at their great railroad terminals, and that the approaches to most of our railroad stations are sordid and materialistic to the last degree. Those who are advocating the retention of this structure, and there are many of them, believe that the community as well as the individual owes it to itself to dress well, and they say that no ornament can be so fittingly worn on the breast of this municipality as this fine old tower.

At the meeting of the Directors that followed the annual meeting it was unanimously voted that a special committee should be created to take this matter up, and its membership has since been determined as follows: Mr. Arthur C. Comins, chairman; Mr. Edward J. Cross,

Charles Perkins Adams
Director

S. Foster H. Goodwin
Director

Daniel E. Denny
Director

Albert H. Inman
Director

Franklin B. Dubbee
Director

Mr. Herman Schervee, Mr. Malcolm M. Grant, Mr. Lucius W. Briggs.

Another matter of quite a different sort, which also received consideration at the meeting, was the proposed credit guaranty fund of $200,000 which this Board has voted to raise in order to extend the credit accommodations open to going Worcester concerns.

Atty. Daniel W. Lincoln, a member of this Board, made a most interesting and lucid address on the subject of the proposed fund and bespoke for it the cordial interest and assistance of the organization. Mr. Lincoln has made a thorough study of the scope, possibilities and workings of the proposed fund and is satisfied that it is not only a thoroughly practical, but highly desirable acquisition to a commercial organization such as this is. In Williamsport, Penn., where the plan originated, the original guaranty has been increased to $465,000, and it is said that largely through its operations new capital has been brought into that city in the last nine years amounting to $2,125,000. In all that time there has been but one default, and that was for less than $3000.

President Tatman, to whom the Board is largely indebted for launching this movement, heartily endorsed Mr. Lincoln's words. The plan is also commended to the public in the Secretary's report, as will be seen below. It is probable that a special committee will be appointed at an early date to co-operate with the Secretary in securing the necessary pledges to put this fund into working order. The Secretary has already secured pledges for a considerable amount towards this fund.

After faithful, untiring and conscientious service for four years, Messrs. Frank S. Blanchard, William Forsberg, Winthrop Hammond, John W. Higgins and Clarence W. Hobbs retired this year from the directorate, and there were elected as their successors Messrs. Charles Perkins Adams, Hon. Daniel E. Denny, Franklin B. Durfee, S. Foster H. Goodwin and Albert H. Inman. At the Directors' meeting which followed, Mr. Charles T. Tatman was re-elected president, Mr. E. M. Woodward, vice-president, and Mr. Herbert N. Davison, secretary.

Mr. Dana M. Dustan was elected by the annual meeting clerk of the corporation, Mr. William H. Sanford declining re-election; Mr. Albert L. Stratton was re-elected treasurer, and Mr. H. Ward Bates, who has made this organization an extremely capable auditor, having tendered his resignation in that capacity, Mr. E. Bruce Dunn was selected in his stead.

President Charles T. Tatman presided over the deliberations of the meeting and, as provided in the constitution, made in behalf of the Directors the following annual report:

The Report of President Charles T. Tatman

Members of the Worcester Board of Trade.

Gentlemen: In giving a brief report of the activities of the Worcester Board of Trade during the past year it is difficult to decide what to mention and what to leave out, as the year has been a busy one.

It is a great satisfaction to be able to say that today the organization has a larger membership, is more active and has a greater influence than at any previous time in its history.

We are on a sound financial footing, are perfectly solvent, and besides the assets represented in the equipment of the rooms and current funds, we have more than four thousand dollars in the savings bank.

At the last annual meeting the by-laws were amended in several important particulars. One serious change was that in respect to the dues of new members. The old by-laws compelled us to carry over free a large number of last year's new members, giving them all the privileges, and without a dollar of income to the Board from them. Furthermore, the new by-laws gave us only five dollars apiece from this year's recent new members, instead of ten, and most of the expense of the whole year was enjoyed by these new members and had to be met by the Board. In spite of these handicaps on both ends, we have succeeded in keeping our financial hands washed. We have even added a substantial amount of new furniture, including desks and chairs, and a much-needed equipment of cupboards for the storage of magazine files and magazine cuts.

EDWARD M. WOODWARD
Vice-President

I do not believe in trying to lay up any more money in the savings bank. We should still be economical in our expenditures, always spending wisely. But there are plenty of useful ways for spending, and I firmly believe that our members are entitled to have the entire income of the organization expended each year for the common good.

One of the important events of the year was the excursion to Seattle carried on in the name of this organization, and participated in by more than one hundred persons, many of them members of the Board, traveling in one exclusive, special train across the continent and back. The Board of Trade Glee Club went in a body, and gave many concerts which served to entertain the people of the West and to advertise our city. On this excursion 22,000 tasteful booklets, gotten out in a shape typical of the "Heart of the Commonwealth," were judiciously distributed along the whole route. The booklets contained much interesting information, attracted great interest, and cannot have failed to advertise Worcester in a dignified and profitable way. The city was honored by the management of the Alaska-Yukon-Pacific Exposition at Seattle, by the setting apart of "Worcester Day," and a proper celebration of the same.

A very large part of the time and attention of our former Secretary, Mr. John L. Sewall, was taken up with the arrangements for this excursion, the journey itself, and the inevitable aftermath which always follows such an affair. He was rewarded, however, and the Board of Trade was honored, by his selection late in the fall of 1909, as the Secretary of the Boston-1915 Movement.

Our former Assistant Secretary, Mr. Herbert N. Davison, was promoted to be secretary. He is a tactful, able, hardworking gentleman, and is rendering substantially more value to this organization than he receives at present.

It is mostly to the credit of this organization, and largely due to Mr. Davison, that the New England Corn Show is to be held in Worcester next fall.

One of the pleasant things done during the year was the entertainment of the distinguished Japanese Commissioners. It was a necessary courtesy which someone had to extend to these honored foreigners, and I am sure the people of Worcester were very glad to possess an organization which was able and willing to assume the responsibility for this piece of international politeness.

There were held more than the usual number of smoke-talks, and the standard of excellence was unusually high. The annual banquet had a record-breaking attendance, and seems to have given general satisfaction. The arrangements for these social affairs have been under the guidance of Chairman Arthur C. Comins and his Committee on Meetings and Receptions, to whose

intelligence, foresight and industry is due the complete success which has been won.

The Worcester Magazine has been published regularly every month, and speaks for itself. It does not cost the Board of Trade anything, and it is of the greatest value in advertising the city and its industries. This Magazine is universally recognized as the best official organ of any of the commercial bodies in the country, thanks to Mr. George F. Booth, the Publication Committee, and Mr. Davison. Valuable as this work is, the Secretary ought not to be required to give so much time to it as he has been obliged to during his incumbency. There ought to be a permanent editor for the Magazine, to work under the supervision of the Secretary. The influence of the Magazine has been greatly extended during the year by the addition of a large and well selected number of foreign names to the mailing list.

I am much gratified with the prominent participation of this Board in the movement for the concerted action of the business organizations of the East in the matter of railway rates. This movement has resulted in the formation of an association, whose work is now going on.

The Board has given moral and financial aid to the starting of the Worcester Playground Association.

We were influential in assisting the railroad trainmen to procure the attendance of the President of the United States at their great meeting in this city, and the impetus given by the helpful attitude of the Board of Trade towards this affair from its inception was much appreciated by the railway men.

The committees have shown a very gratifying interest in their work, and never before have so many subjects been considered by committees. It has been the policy of the Directors to refer matters to committees and to have them thoroughly considered and reported upon, before undertaking to commit the Board of Trade in favor of, or in opposition to, the propositions involved. I submit that this is the correct plan, and that we had better take no action at all on any question rather than to take action hastily and without due consideration. Nothing will so impair the prestige and influence of the organization as too frequent and hasty participation in disputed matters.

There are several things which are as yet undone to which the Board may well give its attention during the coming year.

The elaborate plan for temporary financial aid to new industries has been carefully worked out, and the banks of the city have shown a friendly interest by promising their co-operation. A substantial start has been made towards pledging a satisfactory guaranty, and it only remains for Worcester business men to demonstrate the amount of their civic pride in Worcester by taking their respective shares of the theoretical obligation.

HERBERT N. DAVISON
Secretary

It is not the only nor the chief function of the Board of Trade to get new industries into Worcester. We mean to be a clearing-house of information, and the Committee on New Enterprises will always consider the merits of proposed new industries, but this organization is not in the promoting business. All any enterprise is entitled to from the Board of Trade is our investigation and our moral support, if it be found worthy and promising.

We have started a file of available factory sites and buildings, and it is hoped that with the co-operation of real estate owners and agents this feature of our work will be rendered very complete and valuable during the coming year.

The collection of catalogues of things "Made in Worcester," is being kept up and a successful effort should be made at once to secure its practical completion. Constant attention will have to be given to this collection in order that it may be at all times up-to-date. There should be an expenditure for adequate and suitable filing cabinets so as to render this collection of use and value.

A committee was appointed some months ago to look into and consider the "Chamber of Commerce" idea, including the subject of suitable housing. I regret to say that this committee has not met.

In my view, it would be an excellent idea for the Board of Trade to have quarters in the same building with, and adjacent to, rooms of other business organizations of the city, such as the Builders' Exchange, the Merchants' Association, the Worcester Branch of the National Metal Trades Association, and others. All such organizations might have parlors and similar rooms in common, and there might be a well-appointed restaurant in connection with the general quarters, with such individual rooms for the respective organizations as their special needs might require.

It does not appear advisable or practicable for such organizations as the Builders' Exchange and the Metal Trades Association to amalgamate with the Board of Trade, some of their work being quite special and not in the line of the general functions of this Board. This statement does not apply so much to the Merchants' Association, although their line of work is of course a little different from ours. There is no magic in the name "Chamber of Commerce," although to some ears it may sound much more grand. It may be observed that the Worcester Board of Trade seems to be doing its work with some appearance of activity under the name which it has worn ever since it was formed thirty-five years ago. The name matters but little.

It seems to me that the general subject of new quarters and closer relations with kindred bodies ought to receive immediate and careful attention.

I want to take this occasion to compliment the Directors upon their excellent attendance at the monthly meetings and their willingness to give much valuable time to their duties. I desire to register my thanks for their cordial co-operation. All the officers and employees have been efficient and loyal.

This city was never so populous or so prosperous as to-day. The Board of Trade is not responsible for that, but it contributes materially, and all that is required to make the organization what it ought to be as an influence for good is the continued, earnest working together of its members, representative, as they are, of the energy and brains of Worcester.

CHARLES T. TATMAN,
President.

The Report of the Secretary

To the Members of the Worcester Board of Trade.

After having been connected with this organization in an editorial capacity on the Worcester Magazine for fifteen months, eleven of which I acted as assistant secretary of the Board, the Directors honored me last December by electing me Secretary, succeeding Mr. John L. Sewall, who went to Boston as executive secretary of the Boston-1915 Movement, so called.

The report which I am to render at this time must, therefore, cover several months of Mr. Sewall's stewardship as well as the four months for which I am directly responsible. As is well known to every member of the Board, the summer of 1909, indeed practically the entire time on from the annual meeting until September, was given up by Mr. Sewall to arranging the details and carrying into effect the excursion to the Alaska-Yukon-Pacific Exposition at Seattle. During this time Mr. Sewall made two trips to the Pacific slope, and the work of this office naturally fell upon my shoulders and upon the shoulders of my associates. How well we discharged that duty you are perhaps a better as well as a more impartial judge than I. As for the trip itself those who made it are unanimous in declaring that it was a success, and they are firmly convinced that Worcester as a city and the Board of Trade as a body gained added prestige and much needed publicity from it.

Under my direction a heart-shaped booklet was prepared advertising Worcester, which was distributed gratuitously in the cities and towns through which they passed. Twenty-two thousand of these souvenirs were given away and the calls for them still continue. It would not have been possible to issue this permanent memento of the occasion had it not been for the splendid co-operation of the manufacturers of Worcester, who thus testified once again, as they do in no other city with which

I am acquainted East or West, their interest in and love for the community which they adorn, support and defend.

Soon after Mr. Sewall's return from Seattle, he was called to Boston, and in December resigned to accept a position there.

In the interval that has elapsed we have endeavored to carry forward to completion some much needed work that will perhaps tell for the future upbuilding and development of Worcester in a less spectacular but no less substantial fashion.

The achievements of these four months can hardly be set forth in the brief time allotted me, but I should be untrue to myself as well as unfair to you if I did not call attention to some of them at this time.

They can be summarized briefly as follows:

The launching of the Credit Guaranty Fund, so called.

The establishment of the Worcester Playground Association.

The preliminary steps towards the establishment of a Worcester Real Estate Exchange.

The securing for this city of the first New England Corn Exposition, and the assistance rendered in bringing to a successful completion the recent Railroad Men's Convention in Worcester.

The Credit Guaranty Fund was suggested to this Board by my predecessor. It is based on a plan that has been successfully worked out at Williamsport, Penn., and Mr. Sewall made a trip to Williamsport for the purpose of securing the necessary data for its transplanting here. The plan does not contemplate selling stock for new industries desirous of locating here, nor for the sale of stock of plants already in operation here; neither is it intended to bolster up weak or failing industries. It was inaugurated simply and solely for the purpose of extending the credit accommodations open to going concerns that are in need of temporary loans. The amount of this fund was fixed at $200,000, and your secretary is now engaged in securing pledges for this sum. I want to take this opportunity to state that I believe firmly in this plan. It has worked admirably in Williamsport; it will work admirably here.

This Board can never accomplish its full duty to this community until it is able to give something more than the glad hand to the manufacturers of this city, who come to it with a perfectly legitimate demand for assistance. It is idle to say that the banks are created for that purpose. The banks of Worcester, like the banks of every other city, are conservative, and wisely so, but they can be encouraged to do more for their customers here, as in other cities the banks are encouraged to do more for their customers by the knowledge that the Board of Trade takes an active, vital, practical interest in increasing the industrial wealth of this community.

ALBERT L. STEVENS
Treasurer

In Williamsport the banks are actively, not passively, interested in the Credit Guaranty Fund plan, and I look forward to the day when the banks of Worcester will take an equal interest in the plan here.

If one hundred of the leading business men of Worcester would agree to pledge their credit for $2000 apiece to this plan, the entire sum could be raised inside of twenty four hours, and I know of no way in which they could so prove their citizenship and testify their belief in the future of the city which we all so dearly love. I hope and expect, with the assistance of the officers and members of this body, to raise this sum before another annual meeting rolls around.

The Playground Association organized under the auspices of this Board must prove a great boon to the Worcester of to-morrow. It has been long needed, and if the present administration had accomplished nothing else for this community it would have deserved lasting credit for this one achievement.

The necessity for the organization of a Real Estate Exchange in Worcester cannot be gainsaid. The business of buying and selling real estate here should be organized, systematized and harmonized. The arguments against individualism in every other industry are equally cogent when applied to this industry. The existing situation is full of disappointment to the agent and dissatisfaction to the customer. A uniform commission, honest and open dealings with the buyer and the elimination of all dealers unwilling to conform to these practices would eventually result from such an organization.

The medical men and the legal fraternity long ago learned that it was absolutely necessary for them to have organizations of their own in order to maintain the standards of their professions. There is equal necessity for the great realty interest—the fundamental source of all our wealth—to have an organization equally strong, equally rigid in its code, equally high toned. There is abundant material in Worcester for such an organization. Every large city in this country now has one and I expect to see one here.

When it is formed, for the first time in our history as a city, we shall be able to take account of stock and to find out for ourselves what we have here in the way of factory sites, power plants, house lots, vacant stores and tenements, and to put that material in such shape that he who runs may read. The result in attracting new industries, going concerns, skilled labor and desirable citizens, it is impossible to overestimate.

Thanks to the Board of Trade, the first New England Corn Exposition will be held on the Fair Grounds at Greendale, November 7 to 12. The Board has guaranteed the officers of this Exposition $1000, and your secretary has raised this money and it is available when called for. The value of this Exposition to Worcester and to New England is incalculable. The present high cost of living is directly due to the fact that our farmers everywhere have not sufficiently practiced intensive farming. In no section of the country is this truer than it is right here in New England. If we are to continue to absorb millions of Europeans, we must either raise more food stuffs or starve. It is confessed that more fruit trees are being planted in New England this year than have been planted before in a generation, as a direct result of the New England Fruit Show held last season in Boston.

The result of this Corn Exposition with the splendid prizes offered in cash and merchandise will be to stimulate corn growing in New England as it has never been stimulated before.

Such an outcome means hundreds of thousands of dollars of additional revenue to the farmers of these six States, and be it remembered where agriculture prospers we all prosper. Peculiarly proper is it, too, that the Worcester Board of Trade should foster this movement. This is the largest agricultural county in the State, and the thirteenth in the value of its farm products in all the counties of the country, at the last census, while Worcester itself contains some of the finest and most prosperous farms in New England.

The recent Railroad Convention is too near us to need any extended comment at my hands. Splendid publicity was given Worcester by this Convention, and no credit is too great to give the men who originated and carried it to completion, but it deserves to be said that the Board of Trade co-operated in and helped make possible this success, and that it would not have proved the success it did had it not been for the work of this Board cannot be gainsaid.

The work of this Board is becoming nationalized and even internationalized. The President of this Board, Mr. Charles T. Tatman, was a delegate from this body to the Lake Mohonk Conference, for the discussion of International Arbitration, in 1909, and has been re-elected this year. We are constantly being appealed to to send delegates not only to all sections of this country, but to Europe as well. Through the good offices of

DANA M. DUSTAN
Clerk of the Corporation

E. BRUCE DUNN
Auditor

Mr. J. Russel Marble, there has been recently extended an invitation for some member of this Board to accompany his friend, Capt. G. L. Carden, U. S. R. C. S., on a European tour of inspection this fall this tour to consume some six weeks, and to include in its itinerary many of the leading manufacturing establishments of Germany, Austria-Hungary, Italy and other continental nations.

Our Directors are asked to go on record at every meeting on a variety of subjects of national importance emanating from the leading commercial organizations of the country. In short, the Worcester Board of Trade now has a national reputation as a working body, and your utterances and your views, as voiced by the Board of Directors, influence legislation in the halls of Congress and public sentiment in far distant States. This fact, while gratifying to our pride, ought to bring with it a sobering sense of responsibility and should always operate to prevent hasty and immature action.

The chairman of the Committee on Transportation and Railroads will give the Board a fine idea of the work done by his committee, but I want to say, in addition to what Mr. Woodward will so well offer, that this committee has had before it this year a vast mass of business, much of it of a technical and involved nature. It has given a great deal of time to its duties, and so far as I am able to judge, such action is necessary. The railroad problems that are now confronting the country require the ablest brains in America to solve, and these problems in one shape or another are more and more coming to us for solution. It will soon be recognized that the individual shipper is not strong enough to secure for himself the advantages that he believes he ought to possess, and he will more and more appeal to commercial organizations such as this to secure it for him. When that time comes, shall we give him bread or a stone?

The Boston Chamber of Commerce has established a traffic department and has placed an able man at the head of it, and we have been accustomed to look to him for guidance and leadership, but will Boston's interests and Worcester's interests always be one and the same? Are we not as a community peculiarly interested in railroad matters and in railroad rates, and must we not as a community be prepared to look out for ourselves?

CHARLES H. BOSWORTH, Advertising Manager
Worcester Magazine

I believe this Board should secure, as soon as possible, and on as economical a basis as possible, the services of an expert traffic manager, in order that we may be prepared to protect the great manufacturing industries of this city in this most important particular. We cannot too early go about this matter. Indeed, if the Worcester Board of Trade is to fulfill its mission, it must in this, as in every other particular, justify its faith by its works, and provide the man for the emergency, even before the emergency arrives.

Having given this brief résumé of the work of the past four months, I desire to call your attention to the future of this organization. As I view it a board of trade is peculiarly and essentially a business body. It may and does discuss ethical questions, but it seems to me that its principal business is of a more material sort—the securing of desirable new industries, the fostering of those we now have, and in general the material development of the community in which we live and from which we derive our living. Cities no longer grow like trees, rather are they forced like hot-house plants. We may not fancy this method of growth, but that fact does not prevent its being true. There is not a going concern in Worcester that our neighbors would not be glad to appropriate if they thought it could be induced to move.

Many cities conduct an active propaganda for the purpose of securing desirable plants from other towns, and Worcester from its eminence as an industrial centre is a target for much of this solicitation.

As an organization we must be prepared to defend, protect and cherish the manufacturers of this community. What injuriously affects them will sooner or later injuriously affect everybody. What benefits them will inevitably benefit all the rest of us. We should, therefore, it seems to me, as an organization make it our special business to hold all that we now have and put forth every legitimate effort possible to get more.

As a city, we can offer manufacturers advantages in the way of skilled labor and freedom from labor troubles possessed by no other community with which I am acquainted.

It is certain that with economy in city affairs, the more industries we get here the lower the tax rate, and the lower the tax rate the more industries we shall secure.

The problem is how to secure these industries, and that question resolves itself in the final analysis into the question of how best shall we present Worcester to the favorable notice of the world.

Every American city is now studying this problem and manifold are the suggested solutions, but I am satisfied after a thorough investigation of the matter here and elsewhere that in the Worcester Magazine we have the most effective form of publicity ever devised for a board of trade. The majority of boards of trade are accustomed to send out spasmodically literature voicing the advantages their communities possess. Such literature, no matter how attractively worded or artistically gotten out, is soon destroyed and speedily forgotten.

This organization sends out, not once or twice a year, but every month, a publication as fine as is produced in America, telling the people of this country what Worcester is doing, and the advantages she enjoys as a community over every other city on the continent. If the Magazine was operated at a loss, I believe that it would pay this Board and this city to continue this publication. Fortunately it is not run at a loss, but at a profit, and this profit helps to pay the general expense of this Board. Indeed, it would not be possible for the Board of Trade to do the work that it hopes to do were it not for the assistance the Magazine gives it. The fixed charges of this Board have amounted until this year to over $10 a member, and were it not for the Magazine, the dues would have to be increased or the work of the Board curtailed.

There has never been a time in the history of this organization when a man got so much for his money as he gets to-day, and when it is considered that in addition to the annual banquet and seven smoke-talks every member of this organization gets a copy of this Magazine free, it does not seem strange that our membership list should be as large as it is.

Our present quarters are absolutely inadequate for our membership and hourly grow more so. We ought to, and must soon have larger ones. The tax upon us for our annual banquet is now no inconsiderable sum. The one just held cost $1900, and the one next year, if our growth continues, will go well over $2000. It is probably unwise if not impossible for us to increase our dues. We must, therefore, in the future as in the past, look to the Magazine not only to pay its way, but to make up any deficiency that may exist. I do not believe that this organization will consent either to stand still or to go back. It must grow, and growing it is bound to need more and more the financial support of the Magazine. I believe that this Magazine is a fixture. It is my aim and my determination to keep it as it is now confessed to be, the finest board of trade publication in the world. It is worthy of the support of every manufacturer in this city, and should receive it, not as a charity but as a business proposition.

It goes now to every consulate on this round globe, and it has made and is making this city known to the purchasing public of every nation under the sun. In the long run and in the short run nothing that this Board of Trade does is so effective, so wise and so essential to its very existence as this publication. If we are to do a larger work in the future than we have done in the past—and I hope we are—we cannot do it unless the manufacturers of Worcester, unless you, my fellow-members, assist me in continuing to make this Magazine a financial success. It is your own to make or mar, and it can be made just as good and just as profitable as you are willing to make it. The more profitable it is the more the Worcester Board of Trade will prosper; the less profitable it is the more the Worcester Board of Trade will suffer.

I ought not to conclude this paper without paying tribute to the gentleman who has so ably presided over the destinies of this organization for the past twelve months. The year just closed has brought with it many perplexing problems, largely of a financial nature. In my efforts to make the income and expenditures of this organization meet, I have ever received from the President the most cordial and hearty co-operation. No moneys have been expended without his careful scrutiny, and in the practice of such economies as it has been possible for me to put into effect, he has given me his assistance and approval. I feel that he deserves the thanks of this organization for the time that he has devoted to its varied activities, for his constant attendance upon its meetings, and for his unsparing efforts in its behalf when the labor demanded sacrifices of both time and money not usually understood nor generally appreciated.

The members of such an organization as this have little knowledge of the demands made upon the President or the amount of time and money necessary to be expended if one is to discharge faithfully the duties of that office. And as time goes on these sacrifices must necessarily grow greater rather than smaller if the Board is to continue its present standing in the very front rank of such organizations in the United States.

Neither would I neglect my associates in the business office. I have had no inconsiderable experience in journalism, but I have never encountered a more valuable man in his chosen profession than Charles H. Bosworth, the advertising manager of the Worcester Magazine. To him, to Mr. George F. Booth, chairman of the Publication Committee, and to Mr. F. S. Blanchard, whose artistic eye has been an inspiration and a guide, any success that I may have achieved in connection with this publication is principally due.

Finally, I wish to acknowledge my great indebtedness and the indebtedness of this organization to Miss Louise A. Parrott, our bookkeeper and stenographer. Her knowledge of the duties of this office, her reliability and her absolute mastery of the business details of this office, render her services well nigh invaluable. No mere monetary return can ever adequately repay an efficient employee for services rendered such as she renders, and I am glad to take this opportunity to testify thus publicly my appreciation of her worth and the value of her services.

During the year there have been twenty three resignations from the Board, seven were dropped for non-payment of dues, and there have been the following deaths:

John Peacock,	June 4, 1909.
Harrison S. Prentice,	June 24, 1909.
Dr. Thomas H. Gage,	Sept. 17, 1909.
Edwin J. Watson,	Oct. 25, 1909.
Frederick F. Hopkins,	Dec. 29, 1909.
William W. Sargent,	Jan. 23, 1910.
Charles W. Bartlett,	March 17, 1910.

The present membership of the organization is 842.

HERBERT N. DAVISON,
Secretary.

The Report of the Treasurer

APRIL 15, 1909, TO APRIL 15, 1910.

RECEIPTS.

Magazine advertising,	$12,687 88	
Magazine sales,	578 24	
Magazine illustrations,	60 13	
Magazine subscriptions,	21 35	
Dues,	5,445 00	
Rent,	684 50	
Glee Club,	8 00	
Lights,	5 70	
Banquet,	164 50	
Sundries,	120 98	
Discount and interest,	199 96	
Booklet,	2,481 68	
		$22,458 22
Balance April 15, 1909,		5,840 56
		$28,298 78

EXPENSES.

Magazine printing,	$5,655 10	
Magazine engraving,	888 66	
Magazine adv. solicitor,	3,107 36	
Magazine editorial work,	1,065 00	
Magazine dis. post.,	384 73	
Magazine local dis. ex.,	69 95	
Magazine incidentals,	845 66	
Light,	55 84	
Salaries,	2,932 08	
General expenses,	2,101 58	
General postage,	222 49	
Office expense,	169 68	
Rent,	970 75	
Glee Club,	20 00	
Furniture,	58 75	
Booklet,	2,408 24	
Banquet,	1,862 22	
		$22,818 09
Balance April 15, 1910,		5,480 69*
		$28,298 78

Cash on hand,	$63 16
Worcester Nat. Bank,	301 22
Worcester Trust Co.,	930 06
Worcester Co. Ins. for Sav.,	1,300 41
Worcester Five Cents Sav. Bank,	592 98
People's Savings Bank,	970 94
Worcester Mechanics Sav. Bank,	1,321 92
	$5,480 69*

Respectfully submitted.

ALBERT L. STRATTON,
Treasurer.

The Widening Influence of Worcester

We are all familiar with the homely illustration of the stone thrown in the ocean, whose widening circles break on the shore leagues away, but we seldom stop to reflect that our acts and deeds are equally potential for good or ill. Still less are we inclined to believe that our life as a community affects other communities miles distant, yet without any self-glorification or undue pride we ought to feel that in a very important sense Worcester is stamping its imprint on our civilization. There is nothing strange or remarkable in this. Worcester had the advantage of being well born. It was not created out of thin air on the naked prairie, a collection of huts about a railroad station. A farming community at the beginning, always the home of indefatigable labor, it has grown to its present estate slowly, gradually, substantially. It has never known a boom nor a panic. The soup-house and the professional booster are equally foreign to it. It knows neither great wealth nor extreme poverty. It has no slum and no Nabob Hill. The highest and the humblest meet here upon the level and part upon the square. As far as America possesses an actual democracy, Worcester typifies it.

This is not to say that Worcester is united and harmonious upon every public question that comes up. Men differ here, and differ as radically as they do anywhere. Because one man has more of this world's goods than another in this community, however, his views and his desires weigh no heavier in the minds of his fellow citizen than the views and the desires of the man less fortunate who is still a good citizen and equally honest.

Worcester is fortunate, too, in not being under the domination of some great corporation that rides it like an old man of the sea and compels its citizenship either to acknowledge sovereignty or accept exile as the price of resistance.

Having said this, and we believe all thoughtful men will agree with our assertions, we feel that as individuals and as a community we ought to exercise great care in the stand we take on all public questions. We are, in a very large and essential sense, working out not only for ourselves but for others the great problems of civic life. On the editor's desk, as he writes, lies a letter from Dallas, Texas, in which the writer states that the Texas city is in the throes of a campaign for civic betterment, and he asks for pictures and information as to the way in which Worcester has worked out the problems confronting the Lone Star municipality.

The Secretary of the Grand Rapids Board of Trade is urging upon his members the adoption of a Grand Rapids trade mark, telling them that Worcester has had an official brand or trade mark since 1658. Last week came from Wilkesbarre, Penn., a request for complete information as to the methods pursued here in the elimination of our grade crossings, and the week before came a letter from Gulfport, Ala., inquiring whether the Worcester Board of Trade favored a commission or a dual chamber in the management of its city affairs.

From Baker City, Oregon, a western boom town, comes a request that we shall send them pictures and facts about Worcester, that they may use them as models and ideals toward which to strive, and in the same mail comes a letter from our neighboring city of Pittsfield stating that the Merchants' Association of that city is sending a delegation to this city to learn how to form a model board of trade, they having decided to effect that important change in their civic life.

Thus from the four quarters of the country in less than thirty days comes the Macedonian cry to this Board and to this city to come over and help us.

In the light of these facts—and they are facts—ought we not as a board and as a city to be impressed anew with the necessity of doing the right thing—not the expedient thing—in every step we take? However lightly the obligation may rest upon us, however unthinkingly we may discharge our civic duties, we cannot escape the responsibility for our acts as citizens. It is true that we are citizens of no mean city, but it is equally true that we are citizens of no mean country. In times of war as well as in times of peace the demand is for patriots, and for men of patriotic action. The man who "vamoosed" to Canada during the Civil War was branded a coward, and the man who did not go to the front until he was drafted could lay little claim to bravery, but either of these men compared favorably with the man who, in times of profound peace, allows his selfish interest to stand in the light of the public good.

Material wealth is desirable and necessary if civilization is to advance, even on all fours. But if the citizens of this republic are to stand erect on their feet like men, it is necessary for them in the last analysis to decide to do things, not because there is a dollar in it, but because it is right: right, not only for this year, but for all eternity.

In so far as the citizens of this community do that, they will work out for themselves a larger measure of liberty, a greater degree of public good, freer and better conditions for the coming generations. In so far as they fail to do that they will not only injure the fabric of our civilization, but they will render it tenfold as weak and sleazy in other and less settled communities still groping in the dark, with their convictions, ideals and principles still unformed.

It will not do for us to say we have no interest in any other city than this. The answer to that is that they have an interest in us, if we have none in them. And we cannot escape that responsibility.

The New England Corn Show

No more important movement is going forward in this country this year than the attempt that is being made, under the stimulus of the New England Corn Exposition, so called, to increase the acreage in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut devoted to growing corn.

New England was originally a corn-growing community. The settlers brought here from old England the knowledge necessary for its planting and cultivation, and there is no doubt in the minds of any historian that this homely crop actually saved the early settlers from extinction.

In a quaintly worded document now in the possession of Mr. Edward B. Clapp of this city, being the memoirs of his illustrious ancestor, Capt. Roger Clap, a Devonshire man born in 1609, who came to New England, settling at Nantasket in 1630, occurs this interesting passage:

Now coming into this country, I found it a vacant wilderness in respect of English. There were indeed some English at Plymouth and Salem, and some few at Charlestown, who were very destitute when we came ashore; and planting time being past shortly after, provision was not to be had for money. I wrote to my friends, namely, to my dear father [in England], to send some provision, which accordingly he did; and also gave order to one of his neighbours to supply me with what I needed (he being a seaman), who, coming hither, supplied me with divers things. But before this supply came, yea, and after, too (that being spent), and the then unsubdued wilderness yielding little food, many a time if I could have filled my belly, though with mean victuals, it would have been sweet unto me. Fish was a good help unto me, and others. Bread was so very scarce that sometimes I thought the very crusts of my father's table would have been very sweet unto me. And when I could have *meal and water and salt boiled* together, it was so good, who could wish better?

From that time until the middle of the last century corn-growing was one of the staple industries of this section, but about that time, thanks to the wonderful industrial development of New England, the boys began to leave the farms and flock into the cities, and those who remained farmers went West, where they took up government lands and entered into competition with the Eastern agriculturist on the most advantageous possible terms.

Within the memory of men now living, corn was raised in such enormous quantities in Iowa and other states that it actually became a drug on the market. The price per bushel fell so low that the Western farmer would not haul it to market and burned it for fuel instead. During these years as good corn as ever grew was sold in Iowa, Kansas and Nebraska for ten to twelve cents a bushel. As fuel it was very much cheaper than either coal or wood.

The inevitable result was that there was a ruinous collapse in farm values not only in Pennsylvania and New York, but even in New England, and hundreds of farms in the East were literally abandoned to grow up to weeds. The period of over-production did not last long. By 1890 corn had begun to rise, and for the last ten years it has climbed up by leaps and bounds. The price of corn as compared with 1899 shows an increase of ninety-seven per cent. None of the other cereals have appreciated in anything like the same ratio in the last ten years. Wheat in this time has increased in value but sixty-nine per cent., while oats only show a gain of sixty-three per cent. in the same period.

One startling evidence of the way in which consumption has overtaken production is found in the exports of cereals. In 1899 we exported 470,000,000 bushels of cereals, while last year, with a crop yield one billion bushels greater than in 1899, we exported only 170,000,000 bushels of cereals.

Fifty-one years ago, in an address delivered before the Wisconsin State Agricultural Society by Abraham Lincoln, he said:

What would be the effect upon the farming interests to push the soil up to something near its full capacity? Unquestionably it will take more labor to produce fifty bushels from one acre than it will to produce ten bushels from the same acre, but will it take more labor to produce fifty bushels from one acre than from five? If it should require just as much to the bushel, there are some probable, and several certain, advantages in favor of thorough practice. It is probable it would develop those unknown causes which of late years have cut down our crops below their former averages.

Population must increase rapidly, more rapidly than in former times, and ere long the most valuable of all arts will be the art of deriving a comfortable subsistence from the smallest area of soil. No community whose every member possesses this art can ever be the victim of oppression in any of its forms. Such community will be alike independent of crowned kings, money kings and land kings.

The time to which Mr. Lincoln referred has arrived. The farmers of New England must practice intensive farming if this old corn-growing section is to do its full share towards feeding the nation. There is not the slightest doubt in the minds of any agronomist that the soil of these six states can be made to produce as much corn per acre as the soil of any state in the Union if the farmers in these states will plant corn as certain to germinate as that planted elsewhere, and will use modern methods of fertilization and cultivation.

It is to this end that the New England Corn Exposition will labor, and on the fruits of its labors vast and far-reaching results to all of us hang.

The Commission Plan

In another section of the Worcester Magazine is an interesting article by Albert M. Child, secretary of the Haverhill Board of Trade, on the way in which the commission form of government has worked out in that city. Massachusetts is the only eastern State that has so far experimented with this method of governing a community. The West appears to be the favorite section for such experiments, Kansas leading off with sixteen towns thus managed. Iowa has five, South Dakota and Oklahoma four each, North Dakota three, and Colorado, Idaho, Missouri, Wisconsin, one or two each. The South and Southwest have also looked upon the proposition to place the affairs of its cities and towns in the hands of a board of directors with some degree of favor. Texas, in particular, starting with Galveston and Houston, now has fourteen communities thus managed; while Tennessee has five, and North Carolina and Mississippi one each.

On the Pacific slope California has three cities under a commission, and Washington, one. It is claimed that in the West the commission idea is gaining ground, but it must be confessed that in spite of all the agitation in its favor hereabouts, it does not readily commend itself to men with Anglo-Saxon traditions. The system of checks and balances inherited by this government from Great Britain is not perfect, but it has furnished white men with the best government and the highest type of civilization known to the race for more than six hundred years, and men will not lightly relinquish what has been gained at such tremendous cost, both in the old world and the new, unless they are perfectly satisfied of two things: first, that the existing system is an absolute failure, or second, that the new system is such a complete improvement over the old that it deserves to replace it.

It would appear that in Haverhill the commission form of government has made good so far. Galveston and Des Moines tell the same story. The question is, will they tell the same story in fifty or a hundred years? Or does human nature change under a commission form of government? It is an interesting question. One thing is certain: the cities that still cling to the older method of selecting their public servants are vitally interested in the experiences of the communities that have broken away, and the Worcester Magazine feels that it has performed a useful public service in putting before its readers in this city and other cities the facts at Haverhill.

Local April Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

Retail trade has been fairly active, although somewhat curtailed by unseasonable weather.

The general outlook and volume of business are good, and apparently unfavorable developments have been more or less exaggerated.

Local bank clearings for the first quarter of this year are as follows:

	1910.	1909.	P.C.	1906.	P.C.
Jan.	$9,533,408	$7,415,248	+28.6	$7,075,983	+34.7
Feb.	8,605,742	5,970,095	+44.1	5,569,739	+54.5
Mar.	10,298,362	6,836,215	+50.6	7,784,644	+ 3.2

Failures for the month of April numbered ten, with liabilities of $242,830 and assets of $159,276, while for the corresponding month of last year they showed a total of eleven, with liabilities of $453,787 and assets of $150,769, while in 1908 they numbered fourteen, with liabilities of $488,293 and assets of $140,950; in 1907 twelve failures occurred, with liabilities of $298,591 and assets of $141,673, and in 1906 there were seven, with liabilities of $47,771 and assets of $6710.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

A. Larsson and A. C. Smith, Elevators, No. 952,044.

A plunger guide for direct plunger elevators, consisting of a number of bearing arms, which are expanding under spring tension. Each of these bearing arms is preferably provided with a roller for engaging the side of the plunger casing, and this entire attachment is preferably made in the form of a fixture which can be connected to the lower end of the plunger.

E. P. Curtis, Hay Tedder, No. 952,238.

This device consists of a shield of wire cloth mounted in rear of the rotary shaft to prevent the hay being blown against this shaft.

Kichizo Iwahori, Hoist, No. 952,742.

This invention relates to pulley-blocks in which an automatic locking device is connected to the pulleys to prevent these pulleys rotating in one direction. The release of the hoisting-rope causes a chain of gears to operate a dog, which clamps the rope on one of the pulleys.

E. W. Norton, Corner Bead for Plastering or Concrete Reinforcing, No. 953,391.

A device consisting of plates designed to have their inner edges applied to the corners of the post or the like, and wire braces attached to bent portions of these plates, and having their inner ends constructed to be anchored to the post.

Otto Pearson, Igniter, No. 953,188.

An igniter for kerosene engines, in which crude oil is delivered to the interior of the engine and vaporized by the heat remaining from the last prior explosion. The fuel is preferably admitted simultaneously with the air, and strikes on a heated baffle plate supported below the inlet valve. To facilitate the heating of this plate, and to avoid any interference with the proper working of the valves, the plate is preferably supported directly upon the igniter, which consists of a hollow body containing a heat-conserving material.

Worcester Quotations

Furnished by Thompson, Towle & Co., Worcester, Mass.

April 20, 1910.

BANKS.	Bid.	Asked.
Mechanics National Bank	145	.....
Merchants National Bank	170	.....
Worcester National Bank	210	.....
Worcester Trust Company	325	.....
RAILROAD STOCKS.		
Boston & Albany	223	last sale
Boston & Maine common	145	last sale
Boston & Worcester Elec. common	.....	10½
Boston & Worcester Elec. pfd.	45	47
Fitchburg preferred	125	last sale
New England Inv. & Sec. pfd.	96	97
New York, New Haven & Hartford	155¼	last sale
Norwich & Worcester	214	last sale
Providence & Worcester	265	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investment	75	80
INDUSTRIAL STOCKS.		
Crompton & Knowles pfd.	147½	.....
Denholm & McKay common	200	.....
Denholm & McKay pfd.	100	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd.	115	117½
Royal Worcester Corset Co.	140	.....
United States Envelope common	50	51
United States Envelope pfd.	114	115
Worcester Gas Light	270	.....
Worcester Electric Light	270	290
Wright Wire Company common	102	.....
Wright Wire Company pfd.	110	115
BONDS.		
Amer. Writing Paper 1st 5's	88½	89
Boston & Worc. St. Ry. 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5¼	basis
Marlboro & Westboro St. Ry. 1st 5's	.....	98
Norcross Brothers 1st 6's	98	100
United States Envelope 1st 5's	101	102½
Worcester Cons. St. Ry. 1st 4½'s	94½	.....
Worcester & Marlboro St. Ry. 1st 5's	.....	98
Worcester & Southbridge St. Ry. 1st 4½'s	85	90

Current Events

Personal and General

March 26. Reports made at annual meeting of the Worcester County Institution for Savings show an increase in deposits for the year of $950,000; total deposits amounting to $21,259,366.

29. Mechanics' National Bank of Worcester declares semi-annual dividend at the rate of 8% per annum; former rate 6%.

Ralph E. Stewart, treasurer's clerk at the Worcester County Institution for Savings, resigns to engage in business for himself.

April 1. Reports from Worcester Postoffice show increase in sale of stamps over March one year ago of $5,203.20.

2. Chas. G. Stratton, president and treasurer of the Curtis Mfg. Company, distributes $7000 to the one hundred men he had long employed.

8. Commercial Transportation Company incorporated under Massachusetts charter, capitalized at $16,000, to do motor trucking in Worcester.

12. Announcement made that the Worcester Art Museum will get $2,971,405 from liquidation of the Stephen Salisbury estate.

14. Geo. H. Ward Post, G. A. R., with 250 members and guests celebrates forty-third anniversary.

16. Worcester Merchants' Association holds first of a series of free excursions into Worcester from surrounding towns.

19. Worcester Board of Trade holds annual banquet, attended by 700 members and guests. Senator Joseph W. Bailey of Texas principal speaker.

21. Worcester Playground Association completes organization by the election of Geo. F. Booth as president.

22. Announcement made that ex-Senator Joseph B. Foraker of Ohio will be the orator at the Memorial Day exercises of Geo. H. Ward Post, G. A. R.

24. Secretary Edward B. Clapp of the Worcester Merchants'

Association returns from a tour of the merchants' associations of southern states.

26. Worcester Board of Trade holds annual meeting, reports showing progress in the work of the Board read, and following officers re-elected: President, Chas. T. Tatman; Vice-president, Edward M. Woodward; Treasurer, Albert S. Stratton; Secretary, Herbert N. Davison. Dana M. Dustan elected clerk, succeeding Wm. H. Sanford, and E. Bruce Dunn, auditor, succeeding H. Ward Bates.

Worcester Y. M. C. A. has adjourned annual meeting. Frank H. Robson re-elected president for fourth term.

Industrial News

March 21. Heywood Boot & Shoe Company award contract to E. J. Cross to build brick addition, five stories, 25 x 40.

Norcross Bros. Company begin work on addition to the woman's college at Brown University. Structure three stories, 45 x 138, with limestone trimmings.

Chapel Mills Mfg. Company increases capital stock from $200,000 to $300,000.

23. E. J. Cross awarded contract by White, Pevey & Dexter for an addition to their slaughterhouse of 12,000 square feet.

29. Merchants' National Bank of Worcester buys building occupied by Rebboli Sons & Company. Building and land assessed for $53,000.

Hassam Paving Company awarded contract for fourteen miles of Hassam paving for the Long Island Motor Parkway.

April 1. Painters and Decorators' Union enters into a three year agreement with master painters, at rate of $3.20 a day of eight hours, time and a half overtime, and double time Sundays.

6. J. W. Bishop Company receive contract to build brick addition to the factory of the Atlas Hat Mfg. Company, at Fairhaven. Three stories, 50 x 150 feet.

7. E. J. Cross awarded contracts to make brick and stone alteration to plant in Greendale, to cost $25,000, also brick, metal and glass alterations to cost $5500.

City Hall Affairs

March 22. Worcester low-pressure water service increased 25 pounds to the square inch, making a low pressure of 95 pounds.

29. Worcester City Council votes to install experimental filter beds to cost $25,000.

April 5. At meeting of Park Commissioners, Arthur V. Parker appointed superintendent of parks to succeed John H. Hemingway, resigned.

11. Mayor James Logan and Fire Chief Geo. S. Coleman sign contract for a first-size Metropolitan steam fire engine, at a cost of $6150.

Necrology

March 24. Harry Prendiville, of 239 Park Avenue, dies of heart disease, aged 62 years. Deceased widely known as a composer of band music.

April 15. Charles Warren Gilbert of 14 Trowbridge Road, aged 74 years, 4 months and 14 days. Mr. Gilbert was one of the first loom manufacturers in Worcester.

26. Walter S. Pratt of 165 Chandler Street, aged 36 years, 11 months and 17 days. Mr. Pratt was manager of the Wellington Coal Company.

Has the Editorial O. K.

Every newspaper man that ever struggled to cover clean, white paper with good black ink will appreciate and subscribe to the following article, "writ ironical," in a mighty interesting boom edition of the Springfield, O., Sun, just issued:

"Men who make newspapers sometimes believe that their profession is an exacting one. They are wrong. It is the simplest calling. Making a newspaper is an easy trick. Anybody can do it.

"A lawyer with only a diploma and a brass sign, who would lose a suit even if the other side was ready to confess judgment, will tell you how to run a newspaper. A physician who would send his patient to the morgue before the prescription has been filled will know all about the fine points of making a newspaper. An actor who never earned any other plaudit than a soft tomato will give instructions in handling the world's news. An old lady who knows enough to get off a street car backwards has positive opinions on it. Even a society person who never paid anything but calls, or made anything but a visit, knows how stupid those men are who write 'stories,' edit 'copy,' wrestle with 'heads' that won't fit and get the paper out on time.

"One reason for the university of perfection in this trade among those who do not work at all is that everybody has been employed in it. It is a most unusual thing to meet a man who, when the occasion seems ripe, will not say, 'I used to be a newspaper man myself.' Every time a man works his country editor for a puff on strength of a big pumpkin, he graduates in journalism. When he writes a 'piece' for the Squash County Clarion about a most enjoyable entertainment, he completes his post-graduate course in newspaper work, and when he writes a communication on both sides of the paper to the editor, he becomes a thirty-third degree member of the Tribe of Scribe.

"That so many men have abandoned literature for law, medicine and other easy walks for life simply shows that many men would rather fail in one thing than another."

From the Field

News Gleaned in Many Cities on Work Being Done by Commercial Bodies

"Superior goods for superior people" is the slogan of the Superior, Wis., Commercial Club, and efforts are to be made to get the citizens to pledge themselves to buy their goods as far as possible from home merchants and manufacturers.

A fund of $5000 has been subscribed by the business men and other citizens of Mt. Vernon, N. Y., for the establishment of a board of trade in that city.

Morgantown, W. Va., starts off with a new Board of Trade of 200 members.

Within the past ninety days outside capital to the amount of $250,000 has been invested in Roanoke, Va., through the efforts of the Chamber of Commerce.

Connellsville, Penn., has raised a $200,000 guaranty fund under the auspices of the Chamber of Commerce. The plan adopted is the same one in use in Williamsport. Butler, Penn., is also considering adopting the same plan for the use of its chamber in securing new industries and helping old ones.

The Board of Trade of Niagara Falls is agitating the subject of a peace jubilee in honor of the centenary of peace between Great Britain and the United States.

The Business Men's Association of Jacksonville, Ill., makes a feature of its noonday lunch. A recent one had for a subject of discussion, "Holiday Excursions," and the cost of the lunch was twenty-five cents.

The people of Norfolk, Va., are calling on the Two Hundred Thousand League of that city to show some results. It is stated that it might accomplish something, among other things, in direction of providing the city with a suitable convention hall.

The Minneapolis Commercial Club now has 1301 members, and has 147 names on the waiting list.

Attorney John Sidney Webb of Washington, D. C., has been selected by the San Francisco Chamber of Commerce to represent that organization at the national capital.

WORCESTER BOARD OF TRADE
EACH FOR ALL ALL FOR EACH
11 FOSTER STREET
WORCESTER MASSACHUSETTS
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Our June Number

An Interesting Article on Trolley Matters, by Secretary Watrous of American Civic Association

One of the most important civic conferences of this year was held at Rochester, N. Y., May 2-4, when, under the auspices of the Rochester Chamber of Commerce and the Civic Improvement Committee of that city, the second National Conference on City Planning and the Problems of Congestion convened in that city.

This Board is fortunate enough to secure as its representative at this conference, Mr. Richard B. Watrous, secretary of the American Civic Association, who will prepare for the June number of the Worcester Magazine a comprehensive account of the proceedings.

The widely known literary ability of Mr. Watrous affords sufficient guarantee of the interestingness of the report he will submit. The discussions that characterized the conference brought out facts of the utmost importance to every organization doing civic work in this country, and for this reason his résumé of the proceedings is bound to be well worthy of perusal and preservation.

One of the gravest problems discussed at Rochester was that of the circulation of passengers and freight in relation to the city plan.

Among the speakers on this one subject were Hon. George R. Stearns, Director of Public Service, Philadelphia, Pa.; Hon. Calvin Tomkins, Dock Commissioner, New York city; Nelson P. Lewis, chief engineer of the Board of Estimate and Apportionment, New York city; Prof. James S. Pray, Harvard University; John Nolen, landscape architect, Cambridge, Mass.; George E. Kessler, landscape architect, Kansas City, Mo.; Henry V. Hubbard, Harvard University; Sylvester Baxter, Secretary Metropolitan Improvement League, Boston, and George R. Wadsworth, civil engineer, Boston.

These men are all authorities on this subject, and not only this city but all cities will be tremendously interested in their findings. This is but one of the interesting subjects to be treated in the June number of the Worcester Magazine.

Improved Train Service

New York, New Haven & Hartford Railroad Restores Valuable Train to Schedule

Thanks to the good offices of the Worcester Board of Trade, the New York, New Haven & Hartford Railroad has restored to its train schedule the train from Fitchburg to New York, leaving Fitchburg at 11.50 a.m. and reaching New York at 5.30 p.m. They have also put on a train leaving New York at 5.02 p.m., and arriving in Fitchburg at 10.35 p.m.

These two trains are bound to be of great value to Worcester. The train bound for New York will leave this city at 12.45 p.m., and on its return will arrive in this city at 9.43 p.m.

The innovation will go into effect June 6. There will be a buffet parlor car between New York and Fitchburg in each direction, and coming east there will be a dining car attached, running between New York and New Haven.

The particular advantage to Worcester people lies in the fact that by leaving here in the morning a business man will have ample time in the afternoon to transact his business in the metropolis and still return to this city the same night. There has long been a demand for accommodations of this sort, and the railroad's action is bound to be appreciated, not only by the Board but by the public generally.

The following is the schedule of the trains running each way:

P. M.	DOWN		UP	P. M.
5.02	**Leave**	**New York**	**Arrive**	**5.30**
h 5.13	Due	125th Street	Due	*g* 5.19
5.52	Due	Stamford	Leave	——
5.56	Leave	Stamford	Due	——
6.07	Due	South Norwalk	Due	——
6.28	Due	Bridgeport	Due	4.08
6.50	Due	New Haven	Leave	3.45
6.54	Leave	New Haven	Due	3.41
7.30	Due	Middletown	Due	3.00
b	Due	Cobalt	Due	*b*
——	Due	Turnerville	Due	——
8.23	Due	Willimantic	Leave	2.08
8.25	Leave	Willimantic	Due	2.05
b	Due	Pomfret	Due	*b*
9.01	Due	Putnam	Leave	1.25
9.03	Leave	Putnam	Due	1.23
9.17	Due	Webster	Due	1.09
9.43	**Due**	**Worcester**	**Leave**	**12.45**
9.53	Leave	Worcester	Due	12.35 p.m.
10.27	Due	Leominster	Due	12.00 m.
10.35	Arrive	Fitchburg	Leave	11.50 a.m.

b—Stops to take or leave New York passengers.
g—Stops only to leave passengers.
h—Stops only to take passengers.

A Busy Month

Matters of Much Importance Considered and Disposed of by Directors During April

In addition to the annual meeting and annual banquet of the Worcester Board of Trade, both held during the month that has just closed, this Board has transacted a large amount of business of a less public nature.

At the regular April meeting it was voted to refer the matter of appointing a delegate to the National Tariff Commission, in accordance with a request made by that body, to the Committee on Manufactures for recommendation.

A communication from the Playground Association of America, asking this Board to use its good offices to secure an increased appropriation from Congress for the establishment and maintenance of playgrounds in the District of Columbia, was laid on the table.

A communication from Dr. Melvin G. Overlock, and another of a similar tenor from the Committee of One Hundred, asking this Board to petition Congress to pass

the Owen bill, creating a national board of health, were referred to the Committee on Public Health.

Communications for information were read from the National Board of Trade, stating that they had established headquarters in Washington, from the Philadelphia Board of Trade and from Capt. G. L. Carden, U. S. R. C. S., relative to securing representation from this Board on the tour that he is to make this fall in company with a party of representative American manufacturers of different European countries.

An invitation was received from the Lake Mohonk Conference on International Arbitration to send a delegate to its sessions May 18-20, and it was voted that the President, Mr. Charles T. Tatman, again represent this body at its deliberations.

A communication from the Cleveland Chamber of Commerce, transmitting resolutions calling for an increase in the rate charged for the carrying of the second-class of mail matter, was referred to the Committee on Legislation.

A communication was read from the State Board of Trade extending an invitation to this Board to send five delegates to the Atlantic Deeper Waterways Convention at Hotel Vendome, Boston, May 19, in addition to the regular delegate from this Board to the State Board, Mr. George F. Booth. The following delegates were appointed: Mr. George F. Brooks, Hon. W. A. Lytle, Mr. Clinton S. Marshall, Mr. E. M. Woodward, President Edmund C. Sanford of Clark College.

An invitation was received from Mr. Flavel Shurtleff, secretary of the Second National Conference on City Planning, at Rochester, N. Y., May 2-4, to this body to be represented at that conference by a delegate. As will be seen elsewhere the Board of Trade will be represented at the conference by Richard B. Watrous, secretary of the American Civic Association.

A communication was received from Mr. J. Russel Marble, complaining of the train service over the Providence & Worcester Railroad, and it was referred to the Committee on Transportation, for investigation and report.

The Secretary announced that through the efforts of the Transportation Committee, the Boston & Maine Railroad had added a parlor car to the 8 o'clock train from this city over the Worcester, Nashua & Portland division to Portland.

The Committee on Transportation submitted a report recommending that Mr. George F. Sweeney of Boston be invited to come to Worcester and make this Board his headquarters for the purpose of consolidating shipments west; and it was so voted.

The same Committee reported in the matter of improved train service over the Boston & Albany and New York, New Haven & Hartford Railroads, that it was inexpedient to act at this time. This action was endorsed.

In the matter of Chauncey G. Whiton, petitioning for adverse action on the proposed extension of the powers of the Interstate Commerce Commission over coastwise shipping, the Committee on Transportation reported, sustaining Mr. Whiton's contention. This report with its accompanying resolution was after debate recommitted for further investigation and report.

The Meeting of April 26

On April 26, following the annual meeting of the Board, there was a special meeting called, at which organization was completed for the ensuing year, as has been seen elsewhere, and on motion of Mr. Inman the list of standing committees was continued with the addition of a new committee on agriculture.

A communication from the San Francisco Chamber of Commerce asking this Board to endorse the proposed Panama Canal Exposition which they purpose holding in that city in 1913, was after discussion referred to the Committee on Foreign Trade for investigation and report.

A communication was received from the Merchants' Association of New York asking this Board to send a delegate to a conference to be held in its rooms May 11 to consider whether it is desirable to petition the Interstate Commerce Commission to investigate the whole question of express rates, to see whether they ought not to be materially reduced. It was voted to send a delegate, and Mr. Alfred S. Lowell of this Board was subsequently designated for that purpose.

It was voted that the Board should be represented at the hearing before the Railroad Commission on the petition for the granting of an unlimited trolley freight franchise to the Worcester Consolidated Street Railway in opposition to the same, and the President was designated to represent the Board on that occasion.

The hour being late, it was voted to defer the election of the Executive Committee until the next meeting.

Adjournment followed.

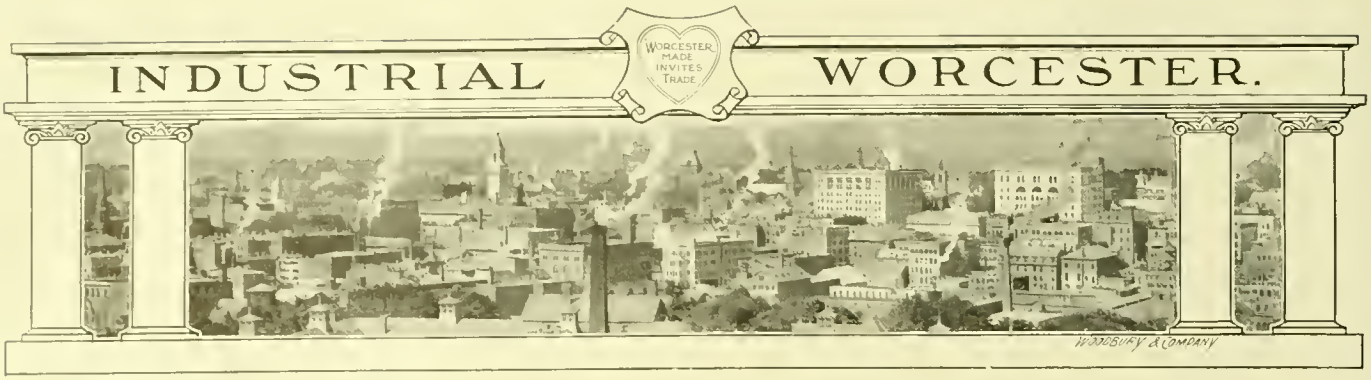
Good News to Iron and Steel Men

"Business is looking up in every line," says the Cincinnati Enquirer. The angle of its vision has not yet reached a very high pitch, but its gaze has been lifted above the level of pessimism, on which it had been fixed for some time.

A great incentive to business in iron and steel, which by its influence must favorably affect all other lines, was the resumption during the week of the sales abroad of our railroad bonds in Europe. Upward of $50,000,000 of these securities were actually placed, and negotiations which will dispose of $100,000,000 more are well advanced and give every promise of success in the near future. This financing movement, which is a resumption of the one interrupted some time ago by the abrupt change in the English situation, means a heavy and long-awaited buying of steel and equipment by the railroads of the country. These needs have accumulated and would have been attended to long ago but for the interruption of the financing plans. Incidentally, the selling of the securities in the foreign markets cured an acute situation in our money market, causing an extensive break in foreign exchange and thereby bringing about a cessation of the heavy outflow of gold to London. With the demand for gold satisfied money rates reacted to the normal level, and thus a condition of fear and demoralization in the Wall Street financial market, which had begun to affect business sentiment seriously throughout the country, was relieved.

Annual Reports to be Bound

In addition to the matter published elsewhere, there were submitted at the annual meeting very interesting reports by the Committees on Arbitration, Education, Foreign Trade, Legislation, Manufactures, Meetings and Receptions, Municipal Affairs, New Enterprises, Publication, Taxation, Transportation and Railroads, and by the Auditor, the Membership Committee, and the Special Committee on Playgrounds. On motion of ex-President George F. Booth it was voted to have these reports all bound in pamphlet form and sent to the members. A year-book will also shortly be published, containing the constitution and by-laws and a revised list of the membership, bringing it up to date.



The Hobbs Manufacturing Company's Addition to Worcester

A prominent member of the Board of Trade, serving on the New Enterprise Committee, not long since remarked anent the various proposals for the location in Worcester of new enterprises that were being considered: "What we want and what Worcester wants is for good enterprises to locate here, begin small according to their means and experience and grow up among us. That is the way in which all the larger and successful houses among us have done."

The Hobbs Manufacturing Company began business in Worcester in 1891 with a modest capital and thirteen employees, occupying the fourth floor in the Vail Building, 15 Union Street. At that time the firm was a partnership, consisting of Clarence W. Hobbs, who acted as manager, Harry W. Goddard, who cared for the finances, and Mr. Richard Sugden of Spencer.

Mr. Hobbs had begun the manufacture of paper box machinery eight years before in Boston. The following year the business was moved to Lynn, where the machines he had produced were used by the New England Box Company, of which Mr. Hobbs became manager, in the manufacture of shoe cartons and folding boxes. In 1888 the paper box department was sold, and the machinery business was moved back to Boston. The business grew rapidly, outgrew its capital and accommodations, and the move to Worcester was made because of the advantageous connections that had been effected with Mr. Sugden and Mr. Goddard.

Paper box manufacture, as an industry, began in a small way about 1850, and continued for many years, more as a handicraft than a business. The demand was limited, the material costly and the prices were of necessity high. The tools employed were of the crudest kind, consisting principally of a scoring machine, usually operated by a crank, a corner-cutter worked by a treadle and a shear designed for hand work. The scorer was made by Clark of New Haven, the corner cutter was designed by C. W. Jencks of Providence, and the shear was borrowed from the bookbinding trade.

To Worcester County belongs the honor of the first notable invention of paper box machinery. Mr. William Orr and Mr. George F. Wright were employers of the Clinton Wire Cloth Company in 1865. That was the time when paper collars were worn by prince and pauper, gentleman and workingman alike, and the Humphrey Paper Box Shop in Worcester made a good many boxes for the collar makers. Mr. Orr visited the shop one day, and while watching the hand workers thought that a machine might be made to do the work being done by the deft hands of the girls. On returning to Clinton he took Mr. Wright into his confidence and between them they produced the first machine for applying the finishing paper to the outside of the box. Several of these machines were made and used successfully for a time, but the particular form of collar box for which they were designed went out of vogue, and owing to difficulty in getting suitable material for use on the machines, their use was discontinued in 1868. In 1880 they were reinvented by one Gordon Munroe of Albany, N. Y., and his successors made a fortune in their sale and use. Mr. Wright later came to Worcester and organized the Wright & Colton Wire Company.

In 1891 the development of paper box machinery had not proceeded far. The Clark scoring machine and the Jencks corner cutter had been improved by J. C. Marshall of Boston, and later by John T. Robinson of Hyde Park, and Toulmin of Worcester, the predecessor of John Jacques & Son, had adapted the shear more perfectly to the boxmakers' use. The American Box Machine Company of Amsterdam, N. Y., had quite generally introduced the Munroe covering machine and human paper slitter, but these constituted the principal tools of the paper box business.

Previous to coming to Worcester, Mr. Hobbs had produced several machines one a machine for strengthening the corners of a box with wire, and another for pasting together and forming the parts of a box. After the Worcester firm was formed the manufacture of these machines was pushed and other new machines were designed. The business grew rapidly. In 1893 the single floor was given up and the two lower floors in the same building were taken. In 1895 Mr. Sugden died, and the business was incorporated under Massachusetts statutes, with a $60,000 capital stock and with Mr. Hobbs and Mr. Goddard as the principal owners. In 1900 three floors of the factory on Summer Street, connected with the Vail Building by a bridge over the Boston & Maine tracks, was also taken.

In 1903 the Vail Building was sold to the Globe Corset Company, and shortly after the Hobbs Manufacturing Company purchased the property and business of the Witherby, Rugg & Richardson Company on Salisbury Street. The capital of the company was increased to $160,000. A four-story addition was built on the Prescott Street frontage, giving a total of 65,000 feet of factory room. A portion of the business of the Witherby, Rugg & Richardson Company was incorporated with the business of the Hobbs Company, principally the machines adapted to the manufacture of wooden boxes, thus enabling the company to appeal to a wider constituency. Three years later a department for the manufacture of wire spring washers was added, the company having purchased the plant and business of the American Wire Washer Company of Unionville, Conn., which has also proved to be a valuable asset.

Early the present year the company again became cramped for room, and a wing, 50 x 70, five stories, has now been added to the Salisbury Street frontage. This addition was designed to give additional office and shipping facilities, and also space for storage. It increased the available factory space to 82,500 feet.

In the summer of 1909 Mr. Hobbs became interested in a company formed in New York by some German capitalists to promote some German inventions in automatic coin-actuated machines for vending postage stamps, railroad and other tickets, letter-stamping machines and change-making machines. Negotiations for taking over the American rights were brought to a conclusion in April of the current year, during a visit of Mr. Hobbs to Germany, and the Hobbs Manufacturing Company will at once begin the manufacture of these machines, in addition to its other products. This branch of the business will, it is expected, require several hundred additional hands, and probably require a still further addition to the plant, for which there is still available ground. The new line is of the same general class of work as the paper box machinery made by the firm, and calls for much the same grade of workmen.

At the present time the company is the largest producer of box making machinery in the world. Its products go to every industrial country, where goods that are packed in paper boxes are manufactured. This field is constantly broadening as new uses for paper boxes are created. The taste of the shopping public is constantly changing and more artistic packages for fine goods are demanded.

The wire spring washers made by the company are used by the millions by the manufacturers of automobiles, by makers of electrical machines, farm machinery, and various other interests, and by the railroads. More than forty millions of these washers were turned out and sold in 1909.

The vending machines are used by all European governments for the sale of postage stamps and railway tickets. Travelers in Germany, Austria, Italy and France having become accustomed to seeing the machines in all railway stations and public places, appreciate the convenience they afford and have wondered why America is behind in this matter. This lack of our equipment promises soon to be remedied.

The works of the company are a most interesting place to visit, and a visitor there sees many things which are not duplicated anywhere else in Worcester, or in New England for that matter.

THE BEAUTIFUL PATIO OF THE PAN-AMERICAN REPUBLICS BUILDING AT WASHINGTON, ERECTED BY NORCROSS BROS., THIS CITY

Norcross Brothers' Splendid Contribution to Washington Architecture.

The city of Worcester has made many important contributions to the artistic and architectural beautification of the capital, but its most ambitious attempt in that direction was turned over to the government on April 26, when the new home of the Pan-American republics, erected by the Norcross Brothers Company of this city, was formally dedicated.

The Norcross Brothers received the contract for the erection of this edifice two years ago, and now that it is finished it constitutes a unique and striking monument to the genius and ability of this concern.

It stands on what was formerly a small peninsula jutting out into the Potomac on ground that in the early days of the republic was owned by David Burns, extending over a considerable portion of what is now the city of Washington. On the little peninsula was the residence of the daughter of Burns, who married General VanNess. This was built a few years after the laying out of the city. In recent years the topography of the land has been materially changed. The government has filled in the water area on both sides and around the little peninsula so that now the Potomac is a half mile away, and the reclaimed land has been converted into a beautiful park.

By a system of underdraining and the sinking of concrete piles, a solid foundation for the structure was secured. The building is of white Georgia marble over a steel frame interior construction. In the last number of the magazine issued by the Bureau of Republics there is a comprehensive description of the edifice beautifully illustrated.

The three-fold purpose of the building—an office for general work, a home of the International Union of American Republics, and a library in memory of Columbus—made difficult the production of plans which in the completed building would produce a well-balanced and harmonious whole. This difficulty was most happily overcome in the design submitted by Messrs. Kelsey & Cret, which received the unanimous approval of the jury appointed to consider and choose among the designs submitted by the many distinguished architects.

After the practical requirements for general office work in the disposition of space and rooms had been solved, the architects determined to elaborate the design submitted in order to produce something significant and unique. They bent all their energies to the conception and development of a consistent theme which should not only tell the story of the Pan-American Union, but also depict particular and striking events in the history of the several countries forming this union.

In the fulfillment of this idea they have portrayed the two great divisions representing the continents of North and South America in the first glimpse the approaching visitor gets of the building. The entrance portico, with three portals leading to the interior, is between two great pylons, at the foot of which there is a colossal group of statuary, one group symbolizing the energetic and aggressive spirit of North America, and the other the more leisurely and restful spirit of the South. Above each group are historical bas-reliefs. The group of the North American side portrays Washington bidding farewell to his generals, and that on the South American side San Martin surrendering the primacy in South American affairs to Bolivar. These two events were selected by ex-Secretary Root as representing two of the greatest acts of self-abnegation in the history of mankind. Above one bas-relief perches an eagle and above the other a condor.

The style of architecture is in a general way reminiscent of the best Latin-American type of about one hundred years ago, but less exotic, more restrained, and simple in design, as suitable to the climate of Washington. In the proportions of the building the Spanish feeling is evident, with here and there in the carving a bit of detail which recalls Spanish or Portuguese precedent. In the frieze and in the band course just below the first-story windows is an adaption from Aztec originals typifying aboriginal art, showing that the Aztec was no mean artist.

Gaining the building, one leaves the climate and locality of Washington behind and enters a patio filled with exotic plants surrounded by open stairways and corridors, a bit of the South, of Latin America at its best. By means of a sliding glass roof, operated by electricity, a constant temperature is maintained which converts the patio into a greenhouse. Thus this bit of the South may be kept intact even during the rigorous winters of Washington. The pavement of the patio, executed in especially designed Enfield tiles, is in striking contrast to the polished marble floors of the surrounding corridors. This pavement, semi-barbarous in design, reproduces well-known archæological fragments from Mexico, Guatemala and Peru. In the centre of this patio is a fountain exemplifying the purely North American aboriginal thought. This is by Mrs. Gertrude Whitney, nee Vanderbilt. Two super-imposed basins are supported by three figures, each representing a period in the aboriginal civilization of the country south of the Rio Grande.

R. H. Higgins Company and Stearns Car.—R. H. Higgins at the Wheel.

The first is an archaic figure symbolizing the Mayan period; the second, the Aztec; and the third, the Zapotecan period. The basins are decorated with strange hieroglyphics of the three races, among which the sculptor has cleverly wrought out the date of the completion of the building (1910) by means of contemporaneous cycle marks and other hieroglyphics. It is well known that the serpent was worshipped by the natives of Central America, and the feathered serpent is one of their best known emblems. Hence, feathered serpents' heads are used in the lower basins as gargoyles for the falling water.

The bottom of the fountain is a tessellated marble, pink and white, with a Mexican star in the centre, on which the superstructure stands. In brief, this is the appearance of the fountain by daylight—at night it can be made to present a different appearance. It is, in fact, the most intricate and minute electrical fountain ever built. There are no less than 4500 feet of tubing connected with its operation. It can be made to present a most elaborate lighting display, an ever-changing form of water discharge. On the waters of the boiling springs surrounding the base the national colors of the different countries can all be made to play.

Near the fountain an ancient warrior in full feathered costume is depicted on the pavement surrounded by grotesque accessories, and on each side of the fountain similar groups are portrayed.

Ascending the broad marble stairways, one enters the vaulted hall of heroes, whose architecture is well proportioned and almost severe in detail. On red marble pedestals on each side are white marble busts of the great leaders in the early days of the southern republics, over whose heads, as in the Henry VIII Chapel in Westminster, hang silken flags. These are the flags of the several republics. The hall itself is an approach to the great hall of the republics and the board room. The former is forty-four feet high in the clear and one of the most dignified rooms in the city of Washington.

It is intended ultimately to decorate its high-vaulted ceiling with a pictured allegory representing the destiny of the Americas. Seven historical paintings of notable events in Pan-American history will adorn the side walls. At present the walls are untinted, but color is given the room through five great windows looking out upon the gardens in the rear. Genealogical trees, bearing the arms of the different republics, embellish the windows. Characteristic bits of ornament appear at intervals in the plaster work. Among these is the feathered serpent of Uxmal. The Dartura lily, which grows in such luxuriance on the tablelands of Mexico, has been extensively used as a motive of embellishment.

At one end of the assembly hall is the board room, where the members of the governing board of the bureau meet to consult regularly every month. This is a most dignified apartment. The color scheme is brown and gold, dominated by a historical frieze in gilt bronze by Mrs. Sally James Farnham. The ceiling supplements her work and reproduces strange forms from the tropics—peace pipes, lilies, and serpents. The mahogany council table was specially designed for the centre of the room. It is oval, nine feet wide and twenty feet long, surrounded by high-backed chairs covered with Spanish leather, each chair bearing the coat-of-arms of one of the republics. Adjoining the board room on the south is the directors' room, entered through massive doors designed from a composite of several Mexican cathedral doors in the plasteresque style.

The business and library offices occupy two thirds the floor space of the building, and are capacious, sanitary, and well-lighted.

From the lofty front vestibule of the building, during one of Washington's coldest winters, one may stand and look out upon an extensive park covered with snow-laden trees, and by a turn of the head gaze within upon the tropics exemplified under the broad glass roof of the patio, or turning from both of these scenes may admire the bronze grill reminiscent of the great choir grills of Spanish cathedrals, or the four golden medallions by Konti, of "Love of Country," "Concord," "Law," and "Enlightenment."

On the left of the large and noble entrance vestibule is a beautiful general reception room finished in Oregon fir, which was given to the bureau by the manufacturing lumbermen of Oregon, the state in which Director John Barrett held his legal residence when invited by the American governments to assume the directorship of the institution.

The general openness of the interior, on both floors, makes the patio, with its splashing fountain, archaic figures in tiles and marble recalling the strange twilight time of American history, and its exotic tree ferns, prickly cactuses, luxurious plants, bright crotons, and other strange tropical flora, the one place of peculiar attraction. Above there is a modern and elaborate scheme of decoration symbolizing the young and vigorous Pan-American union of to-day, and making the miniature jungle below appear to be but a picturesque background for the grouping of the national arms and the great names of Pan-American history.

The land and buildings cost $1,000,000, a large portion of which was given by Andrew Carnegie, who made one of the most brilliant addresses of his career at the dedicatory exercises when the building was formally given over to its great mission of peace and the development of American unity and progress.

WORCESTER STORE, 12-14 MECHANIC STREET

The R. H. Higgins Company

A new concern in Worcester is the R. H. Higgins Company, Worcester County agents for the Stearns motor cars, consisting of Ralph H. Higgins and Willard E. Higgins, brothers, formerly of Newtonville, Mass. Ralph H., after completing a course in mechanical engineering at Cornell University, entered the employ of the E. R. Thomas Company of Detroit, Mich., and was later associated with the E-M-F Company in Boston. Willard E. has been prominently identified with the wholesale and retail lumber business, having been for a number of years with the Blacker-Shepard Company of Boston, one of the largest lumber dealers in New England. They have opened an office and garage at 96 Commercial Street. Both are of that type of hustling young men that Worcester is glad to welcome, and their announced determination that the car they represent shall be better known in Worcester County than any other will doubtless lead to a wide acquaintance among our citizens.

The Stearns motor cars are manufactured by the F. B. Stearns Company of Cleveland, Ohio, and have a high rank in the list of leading makes of motor vehicles. Some of the merits claimed for this car are:

The use of the finest materials combined with correct design; the elimination of unnecessary parts; proper mechanical balance and even distribution of weight, making the car easy on tires, yet possessing the necessary stamina; flexibility of motor and ease of operation of the clutch, rendering maneuvering in crowded streets simple and safe; the use of Continental demountable rims as standard equipment; the silence and ease of its work, making it a surpassing hill-climber with long life and reliability foremost.

The makers claim that the bodies are given the same careful attention as the mechanical construction. In detail, the more important are: rigid system of inspection; perfection of design, giving the air of refinement and grace that proclaim character; particular attention to final finish, upholstering and appointments. The company have a demonstrating car in use, which may be frequently seen about the streets, its distinguishing mark—characteristic of all Stearns cars—being a white band around the radiator.

ACME STEEL LADDER IN USE

The Post & Lester Company

The Post & Lester Company, whose headquarters are at Hartford, Conn., have opened a store at 12-14 Mechanic Street for the sale of motor supplies and accessories. This company operates eight stores, three in Boston, one each in Worcester and Springfield, and Hartford, New Haven and Bridgeport, Conn. They are the exclusive Worcester agents for "Firestone" tires and New England distributors of Stewart speedometers; also Stewart model attachments for motor cars. They show a complete line of auto clothing, caps and robes. To fill the increasing demand for electric horns, they carry the Klaxon, Jones Sireno and Saxon.

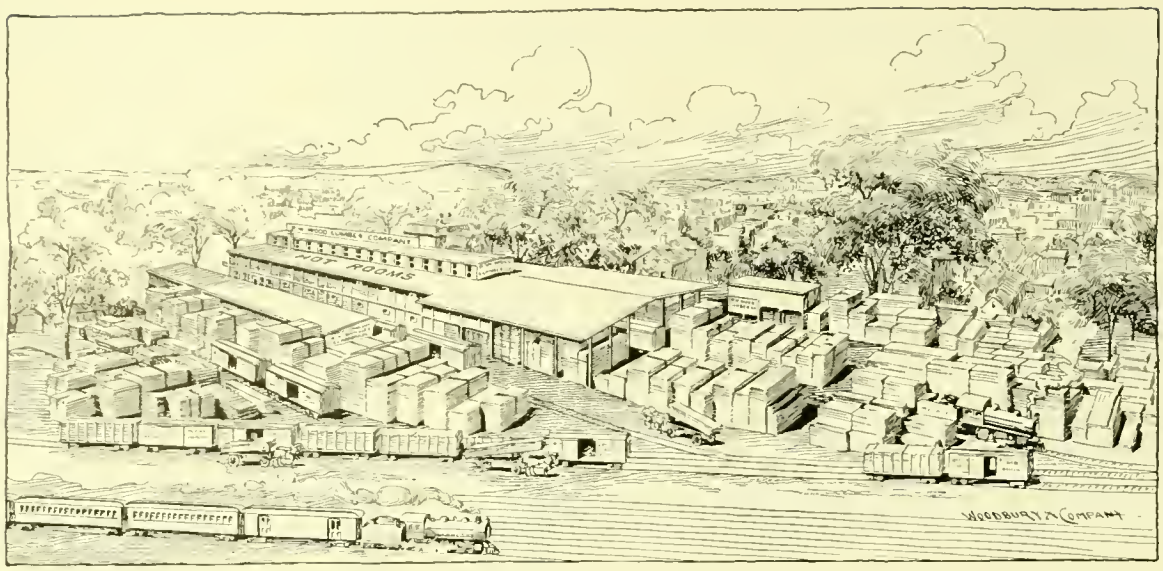
The officers of the company are: D. J. Post, president; C. H. Veeder, vice-president; H. W. Lester, treasurer, and C. B. Lamb, secretary. Mr. O. A. Jones, formerly of Boston, Mass., is the local manager.

The Acme Steel Ladder Company

A welcome addition to the rapidly-increasing list of Worcester products is the Acme steel ladder, the output of the Acme Steel Ladder Company. This ladder is made of round steel in the form of interlocking links, each one foot in length.

The more important of the claims made for this ladder are these: It is useful under all conditions; it embodies the features

NEW ENGLAND MOTOR SUPPLY COMPANY INTERIOR



P. W. Wood Lumber Company Plant

of other steel link ladders with the advantage of being absolutely rigid; made entirely of steel, it is impossible for it to burn, thus making it a very good fire escape; steel feet (a part of the lock) hold the ladder away from the building, and there is so little contact with the building that there is no chance for decay in the wood, and a ladder may be permanently attached without harm ensuing; the interlocking feature enables the owner to make the ladder of any length desired, and its alignment and rigidity are such that it may be handled from any portion of its length.

The peculiar feature of this ladder is the lock. The makers claim that this is simple and effective, and a decided departure in design from that of any other ladder. They emphasize the fact that there is no possibility of the lock slipping when once in position.

The company expects to find a wide field for usefulness for its product as a fire escape, as this ladder is much cheaper than any other form of steel or iron escape now made. The demand for a steel ladder so adaptable for every purpose is shown by the orders and inquiries already received from all parts of the United States and by the numerous applications from leading wholesale houses to handle the goods. At the present time the company's salesmen are covering New England and New York, but as rapidly as possible the distribution will be extended over the whole country.

The Acme Steel Ladder Company was organized about a year ago at Sussex, New Brunswick, by Mr. H. A. McArthur. The product met with marked success in the Provinces and Canada, and early in the present year Mr. McArthur visited a number of cities in New England with a view to establishing the industry in the United States. The numerous advantages of Worcester as an ideal industrial city so appealed to him that he immediately proceeded to establish a plant at 54 Hermon Street, and to-day this industry is employing many of Worcester's skilled workmen and turning out thousands of the steel links that promise to extend the fame of this Worcester product across the continent. Ample capital is behind the company, and its success seems assured.

New England Motor Supply Company

An attractive and unique electric sign marks the location of the New England Motor Supply Company at 24 Austin Street. This company was formed by William P. Farrell and C. H. Adams for the purpose of dealing in auto and bicycle tires, oils, gasoline, carbide and other accessories. An excellent salesroom, complete vulcanizing plant, garage and large storage quarters give the company splendid facilities for the transaction of the large volume of business it has already established.

As exclusive agents of the Falls Rubber Company, handling their automobile tires and tubes in carload lots, and receiving such supplies as carbide in ton lots, the company is in an excellent position to meet competition. It is also the local agent for the Royal Pioneer motorcycle, a Worcester product; the Harley Davidson motorcycle, winner of the diamond medal in the national endurance contest; Hudson and New England bicycles; Empire automobile tires and "Hopewell" tire covers. The manager is Mr. C. H. Adams, for four years manager of the Alling Rubber Company of this city.

L. C. Hamill

Mr. L. C. Hamill, for the past ten years connected with the J. W. Bishop Company of this city, has opened a shop at 94 Commercial Street for the production of wood carvings, architectural decoration in relief, and modeling in plastic materials for various purposes. Mr. Hamill possesses an equipment and experience of the best. While in the employ of the J. W. Bishop Company he had charge of a large crew of men, and under his supervision this department produced the carvings and decorations that embellish the many beautiful public and private buildings that have been so creditable to their erectors.

The work produced by Mr. Hamill at his new plant must be seen to be appreciated, and the public will be given the opportunity when the new banking rooms of the Merchants' National Bank are thrown open for inspection. Work for Clark College is also in process.

Mr. Hamill states that he has no serious competition in this section, outside of Boston and New York, and intends to maintain that standard of excellence which is already producing a thriving business.

The P. W. Wood Lumber Company

The P. W. Wood Lumber Company assumed possession of the business formerly conducted by the Worcester Lumber Company one year ago, and during that period, by close attention to business, have found it necessary to double their shed capacity twice to keep pace with the demand, giving them a floor space of 22,000 feet under cover.

They have installed an up-to-date steam plant, with a capacity of 100,000 feet of floors at one filling, and with constant steam throughout the year are enabled to give their patrons floors which are guaranteed to stay where they are nailed. They have negotiated with manufacturers of known reputation who make the very best flooring and who have built up that reputation by furnishing the very best quality of stock and workmanship.

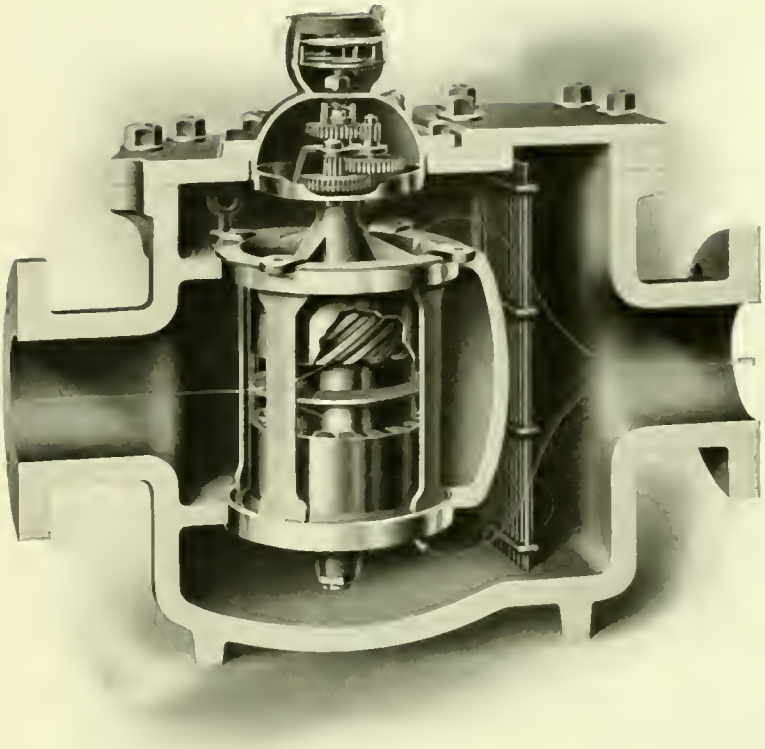
Their yard is one of the best equipped in the State, from an economical standpoint, as indicated in their yard illustration, showing three sidings aggregating 800 feet in length, from which can be stored 2,000,000 feet, direct from car to pile, without the use of a wagon.

Their motto is the "Square Deal," and all comers receive courteous treatment, good values and prompt service. Mr. P. W. Wood has had an active service and experience of thirty years in the lumber business of Worcester, and an acquaintance during that time of all consumers with their varied demands and specified requirements.

Mr. Wood has with him as assistants his son, P. W. Wood, Jr., and Roy E. Dennison, who are active in the demands of the trade, and Leon P. Greenleaf as bookkeeper, with a competent force of subordinates.

The "Nilo" Meter

Those master mechanics and engineers of ancient days, the Egyptians, to measure the rise and fall of that great artery of their country, the Nile, placed an instrument designed for that purpose on an island opposite Cairo, and this instrument is still standing. Emblematic of the long life it promises for its own product, the Union Water Meter Company has therefore given the name "Nilo" to its latest product. The claims of the company for its new meter are of such a technical character that it would be unwise to detail them at length here, but some of the advantages claimed may be briefly stated thus: Vanes and shell so constructed of hard rubber that chance of breakage is slight; separation of flow by a deflector plate to insure equal discharge of water from upper and lower halves of piston, thus maintaining absolute equilibrium, absence of thrust and absolute accuracy on all flows; weight of bronze shaft and pistons relieved by buoyant material in so far that there is practically no weight on ball-bearing of step, eliminating friction, insuring sensitiveness and long-continued service; vanes of pistons so enclosed that no water can pass through meter without actually passing through piston; gearing of a specially compounded non-corrosive material, closely approaching specific gravity of water, and hard and durable; gearing protected by bronze dome, on which rest register and case; dome can be so turned as to bring the register in the most convenient place for reading; all working parts, except register, assembled as a single unit and readily removable without taking meter out of line of pipe; inlet chamber provided with a screen of such type that retardation of flow is reduced to a minimum and labor of cleaning can be quickly and easily performed. The company is to be congratulated on producing another instrument so closely approaching its accustomed high standard of perfection.



Automobile Supplies and Tires

We carry a full and complete line of everything in the way of automobile supplies, clothing, tires, tools, gloves, caps, goggles, oils, greases, etc., and can save you money.

If you own a car, come in and see us

THE POST & LESTER CO.

14 Mechanic Street
Worcester

and other stores in New England as follows:

288 Devonshire St., Boston, Mass.
16 Park Square, Boston, Mass.
98 Massachusetts Ave., Boston, Mass.
125 Bridge St., Springfield, Mass.
175 Asylum St., Hartford, Conn.
1085 Chapel St., New Haven, Conn.
278 Fairfield Ave., Bridgeport, Conn.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

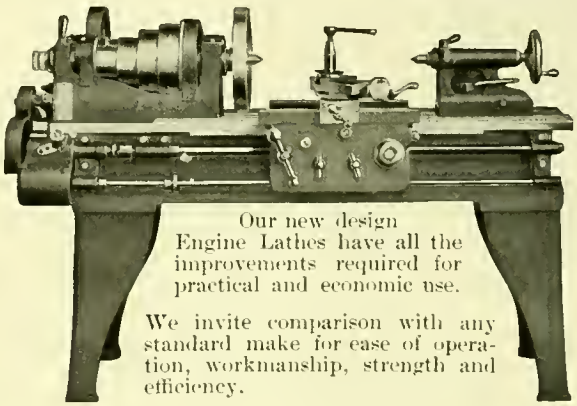
New England Audit Company

Springfield — Court Square Building

Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

ROBBINS ENGINE LATHES



Our new design Engine Lathes have all the improvements required for practical and economic use.

We invite comparison with any standard make for ease of operation, workmanship, strength and efficiency.

12, 14 and 16 inch sizes

Send for Circulars

THE ROBBINS MACHINE CO.

150 E. Lagrange St., Worcester, Mass., U. S. A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE MODERN CITY—WHAT ABOUT IT?

The WORCESTER MAGAZINE Illustrated

LIBRARY OF CONGRESS
JUN 19 1910
PERIODICAL DIV.

Bird's-eye View of Lenox, on Pleasant Street, the New West Side Home Site Owned and Being Developed by the O'Connell Real Estate Company

JUNE, 1910

$1.50 per year

Published by the Worcester Board of Trade
WORCESTER, MASS., U. S. A.

15 cents the copy

ITS VARIED LIFE DEPICTED IN THESE PAGES

Central Supply Company

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

A visit to our warerooms will repay any intending purchaser

Telephone 4440

Foster, Commercial and Mercantile Streets Worcester, Mass.

TRADE MARK

Established 1871

Incorporated 1888

H&R ARMS Co

Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. JUNE, 1910 No. 6

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

THE IDEAL CITY—Report of the Rochester National Conference—By Richard B. Watrous, Secretary American Civic Association, 153-155

THE FRAMEWORK OF THE CITY—The Railroads and the Part They Must Play in the Future Development of the Community—Paper by George R. Wadsworth, M. Am. S. C. E., 156-159

A GOOD CITIZEN—Sketch of Late Gen. A. B. R. Sprague, 160-161

PART THE Y. M. C. A. PLAYS IN A CITY'S LIFE—Sketch of the Worcester Association—By President F. H. Robson, 162-166

THE INTERNATIONAL PEACE CONFERENCE AT LAKE MOHONK—By President Charles T. Tatman, Worcester Board of Trade, 167

THE HOWE MONUMENT AT SPENCER, 168

A CITY AT PLAY—Dead Horse Hill Climb, the Automobile Racing Event of the Year in the East, 169-170

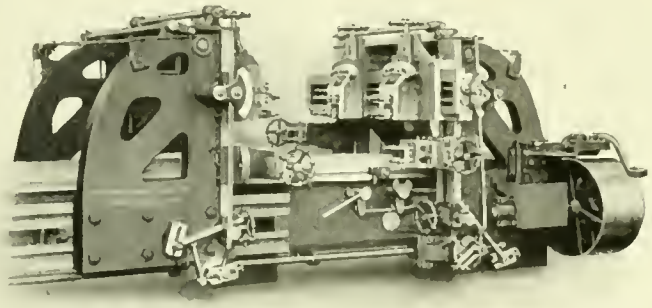
EDITORIAL REFLECTIONS, 171-172
- A City Number.
- Watch Germany.
- Express and Freight Rates.
- The Census and the Telephone.

DEPARTMENTS, 173-174
- Local Trade Conditions.
- Worcester Patents.
- Worcester Quotations.
- Current Events.

BOARD OF TRADE ACTIVITIES, 175-176

INDUSTRIAL NEWS, 177-184

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

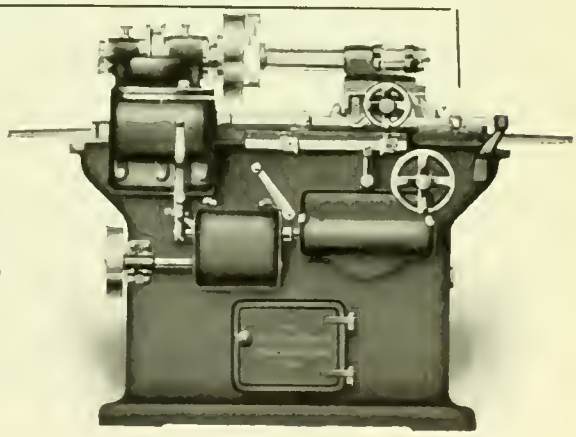
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China; Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal.; Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain; Herman Haelbig, Dresden-A 3, Germany and Austria.

WE MANUFACTURE

GRINDERS



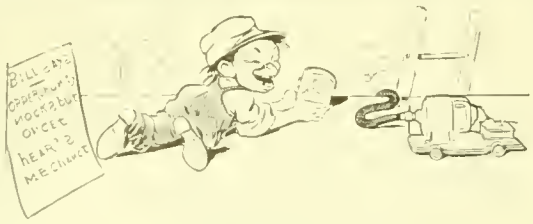
CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,

ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Here's your chance to try the

Coates Flexible Shaft

Opportunity is knocking now at the door of your shop.

With a **COATES** Outfit you can do the work right in position. The Coates is the flexible shaft that transmits full power forward or backward.

Save time, money and trouble on such work as **Drilling, Grinding** or **Polishing.** You're going to unnecessary expense when you tear down the machine and cart the pieces to the drill press or lathe.

Get our Bulletin W.

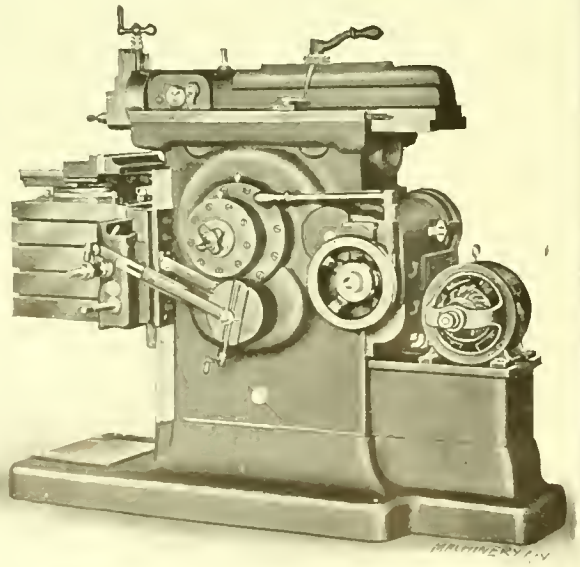
COATES CLIPPER MFG. CO.
Worcester, Mass.

THE HOWARD-WESSON CO.
Successors to
THE ART AND
HALF TONE
DEPARTMENTS
of
WOODBURY & CO

ALL ORDERS
for DESIGNS
HALF TONE
ENGRAVINGS
AND
PHOTOGRAPHS
Will receive our Prompt Attention
2670 TELEPHONES 2671
4 WALNUT ST
OFFICE No. 526

STOCKBRIDGE

New 18″ Shaper All-Geared Drive



Originality characterizes Stockbridge Shapers

STOCKBRIDGE MACHINE CO.
WORCESTER, MASS., U.S.A.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

The Ideal City

The Rochester National Conference on City Planning and the Problems of Congestion; a Convention of Experts in City Building. Specially Reported for the Worcester Magazine

By Richard B. Watrous
Secretary American Civic Association

Of nation-wide importance and significance was the Second National Conference on City Planning and the Problems of Congestion, held at Rochester, N. Y., Monday, Tuesday and Wednesday, May 2 to 4. It was a gathering of experts in the building of cities, assembled for the serious consideration of problems that confront them in responding to the increasing demands for expert advice in directing the future and permanent growth of American cities.

The first city planning conference of a national character was held at Washington in May of last year, at the close of which it was resolved that a committee be formed to arrange for a second conference and to submit a well-considered project of organization for developing comprehensive city planning in America. The committee, as organized, and which had in charge the preparations for the Rochester conference, consisted of Frederick L. Ford, chairman, city engineer of Hartford, Conn.; Allen D. Albert, Jr., publisher Columbus News, Columbus, Ohio; Grosvenor Atterbury, architect, New York city; Frederick Law Olmsted, landscape architect, Brookline, Mass.; Charles Mulford Robinson, civic adviser, Rochester, N. Y.; Clinton Rogers Woodruff, vice-president American Civic Association, Philadelphia; Benjamin C. Marsh, secretary Committee on Congestion of Population in New York city; Henry Morgenthau, New York; and Flavel Shurtleff, secretary, Boston, Mass.

In drafting the programme the committee selected subjects quite technical in their nature and representing the most advanced ideas in modern city planning, and secured as speakers men of acknowledged ability and competent to speak authoritatively on the subjects assigned to them. Provision was made for a thoughtful discussion of the papers read, with the result that the conference proved to be just what it was planned to be—a three days' post-graduate course in city planning, participated in by men who are recognized leaders in the problems of city planning, but who realize the importance to themselves and those they will serve of further and deeper research. It was in no sense a conference for the layman just beginning the study of city building, although those laymen who were present were undoubtedly inspired to undertake with zeal a study of the subject in all its phases.

The hosts of the occasion were the Rochester Chamber of Commerce, which tendered the use of its rooms for the conference and for the exhibits, and the Rochester Civic Improvement Committee, organized within the past year to secure for Rochester a plan by which it may continue its development as one of the very beautiful and efficient cities of the United States. By courtesy of the local committees, the visitors were given an automobile ride about the city Monday morning, followed by a luncheon at the Genesee Valley Club. General admiration was expressed for the beautiful thoroughfares and parks of Rochester, and as the cars passed up and down the section of Oxford Street known as "magnolia avenue," the admiration found expression in bursts of applause, for the magnolias were in full bloom, and presented a scene unequalled for its kind in this country. At five o'clock in the afternoon Mr. and Mrs. Charles Mulford Robinson received the guests at their home, affording a happy opportunity for meeting one another informally.

The first formal session of the conference was held Monday evening at the Chamber of Commerce, its President, Mr. George Dietrich, presiding, and was largely attended by delegates and residents of Rochester. Mayor Hiram H. Edgerton extended a welcome, which was responded to by Frederick L. Ford, chairman of the Executive Committee of the conference. Then followed Mr. Frederick Law Olmsted with a general introductory paper. Mr. Olmsted is the Charles Eliot professor of landscape architecture of Harvard University, and generally recognized as the dean of his profession in America. His address was a scholarly and finished presentation of the general subject of city planning, clearly setting forth what it comprehends, and emphasizing the importance to largely populated centres of meeting intelligently the conditions that accompany material growth, not forgetting the elements of the æsthetic, which are, in reality, so closely interwoven with all that is practical. Our space does not permit the publication in full of Mr. Olmsted's admirable address, but we quote some paragraphs that appeal with equal force to all individuals and communities ambitious to achieve the best in municipal development, as follows:

Three Things to Consider.

"City planning may conveniently be considered under three main divisions.

"The first concerns the means of circulation; the distribution and treatment of the spaces devoted to streets, railways, waterways, and all means of transportation and communication. The second concerns the distribution and treatment of the spaces devoted to all other public purposes. The third concerns the remaining or private lands and the character of developments thereon, in so far as it is practicable for the community to control or influence such development.

"Facility of communication is the very basis for the existence of cities; improved methods of general transportation are at the root of the modern phenomenon of rapid city growth; and the success of a city is more dependent upon good means of circulation than upon any other physical factor under its control.

"Moreover, the area devoted to streets in most cities (excluding those regions that are still undeveloped), amounts to between 25 and 40 per cent. of the whole, and the improvement and use of all the remainder of the city area, both in public and in private hands, is so largely controlled by the network of subdividing and communicating streets that the street plan has always been regarded as the foundation of all city planning."

"We shall not have intelligent city planning until the several departments responsible for the selection of sites for all the different public purposes of a local character get together in laying out a general plan and method of securing such sites.

"We must come, I believe, to a full acceptance of the principle, now well established in some of the German states, that when any tract of land in or adjoining a city is opened up for building purposes, not only the necessary streets must be set apart and dedicated to the public, but also all the other areas that will be required to meet properly and liberally, but without extravagance, all the public needs of that locality, when fully occupied, just so far as those needs can be foreseen by intelligent and experienced men. In no other way can the sites for these local institutions be placed so well or with so little economic waste."

"In all that I have said you may have noticed the absence of any reference to beauty in city planning; that is because I want in closing to emphasize the relation which it bears to every phase of the subject from beginning to end.

"The demands of beauty are in large measure identical with those of efficiency and economy, and differ merely in demanding a closer approach to practical perfection in the adaptation of means to ends than is required to meet the merely economic standard.

"So far as the demands of beauty can be distinguished from those of economy, the kind of beauty most to be sought in the planning of cities is that which results from seizing instinctively with a keen and sensitive appreciation the limitless opportunities which present themselves in course of the most rigorously practical solution of any problem for a choice between decisions of substantially equal economic merit but of widely differing aesthetic quality. Regard for beauty must neither follow after reward for the practical ends to be obtained nor precede it, but must inseparably accompany it."

The Tuesday Morning Session

was devoted to the "Causes of Congestion of Population," with a general introductory outline by Benjamin C. Marsh of New York. He emphasized the fact that in cities there are limited districts in which land values are so high that congestion is unavoidable. He argued that unless restrictions are placed upon real estate operations, "the evils of today in congested districts will be duplicated in newer sections in every city unless action is taken contesting and preventing those conditions." His conclusions were that "since the causes of congestion of population are economic and administrative the remedies must be economic." Mr. Marsh's paper gave rise to animated discussion, with varying opinions as to the real causes of congestion and their solution. It was pointed out by some speakers that even in the districts of very high land values, effective remedies may be secured by wise housing conditions.

A paper prepared by Hon. William S. Bennett, member of Congress from New York city, on "Immigration and Congestion of Population," recited some of the conditions responsible for the huddling together of certain classes of immigrants with disastrous effects upon themselves and their posterity. Causes of congestion in various large cities were presented by George E. Hooker, secretary of the City Club of Chicago; Gustavus A. Weber, secretary of the Octavia Hill Association, of Philadelphia, and Edward T. Hartmann, secretary of the Massachusetts Civic League, of Boston.

At the afternoon session the "Prevention and Relief of Congestion of Population" was considered. Mr. Grosvenor Atterbury, member of the Tenement House Committee of New York city, gave the introductory paper and briefly outlined various methods that have been put forward to prevent overcrowding. Mr. Atterbury pointed out that over 33 per cent. of the population of the country is in the cities of 8,000 and over, and that the percentage is increasing, and he doubted if it was possible to stop the tendency to congestion.

"The Safe Load of Population on Land," was the subject of Mr. Lawrence Veiller, director of the National Housing Association of New York city. Mr. Veiller created considerable amusement by frankly admitting that he did not know just what "congestion of population" meant, and argued that there was no definite rule as to the safe loading of population, since conditions govern this to a great extent. "Room overcrowding is different from land overcrowding," he said, "and the chief cause is the greed of a certain part of our foreign element to 'get rich quick.'"

George B. Ford, a New York architect, took up the question of scientific housing, naming three ways of approach: by social work, by legal enactment and by model dwellings.

Mr. Milton Dana Morrill, of Washington, read a paper on "Inexpensive Homes of Reinforced Concrete," which he illustrated with stereopticon views. Other papers read at this session were, "Municipal Taxation and its Effect on the Housing Question," by Frederick C. Howe, of Cleveland; "Proper Distribution of Factories," by Mr. Edward Pratt, of the New York School of Philanthropy; "Villages for Workingmen and Workingmen's Homes," by Warren H. Manning, of Boston; and "The Co-partnership Principle," by Robert A. Pope, of New York.

Tuesday evening the members of the conference assembled about the banquet tables of the Hotel Seneca and listened to admirable after-dinner talks by Mr. J. Horace McFarland, president of the American Civic Association, who told of the calls that are being made by countless American cities for definite advice and counsel in city planning; Leslie W. Miller, secretary of the Fairmount Park Art Association of Philadelphia;

Joseph Alling, of Rochester, who spoke hopefully of the zeal of the people of Rochester for the attainment of the best in civic development, and Hon. Edward L. Smith, the new Mayor of Hartford, Conn., who was elected in a campaign that was waged in behalf of a more beautiful Hartford. Dr. Rush Rhees, president of the University of Rochester, presided as Toastmaster.

THE SESSION OF WEDNESDAY

morning was in many respects the most important of the conference, as having a direct bearing upon the problems confronting most great and growing commercial centres, and related to the general subject of transportation and its close identification with city planning. The papers of the morning were grouped under the title, "The Circulation of Passengers and Freight in Relation to the City Plan." Very close attention was given to the address of George R. Wadsworth, consulting engineer of the Metropolitan Improvement Commission of Boston, on "Railroads—the Framework of the City Plan." The address of Mr. Wadsworth was so applicable to conditions in Worcester in its aim wisely to adjust its transportation problems that we secured it for publication and urge that it be read and thoughtfully considered.

Other valuable papers on the same subject were "Rapid Transit in Relation to the Housing Problem," by Henry C. Wright of New York city; "Seaport Congestion and its Relation to Transportation and Terminal Facilities," by Hon. Calvin Tomkins, dock commissioner of New York; "Planning of Undeveloped City Areas," by Nelson P. Lewis, chief engineer Board of Estimate and Apportionment of New York; "Street Widths and their Subdivisions," illustrated with stereopticon views, by John Nolen, landscape architect of Cambridge, Mass.; "Covered Ways for a Business District," by Sylvester Baxter, secretary Metropolitan Improvement Commission of Boston; and "The Relation of the Street Plan to Traffic Needs," by James S. Pray, assistant professor of landscape architecture, Harvard University.

At the closing session Wednesday afternoon "Some Problems of Legal and Administrative Procedure Affecting the City Plan," was considered in addresses on "Excess Condemnation and Public Use," by Mr. Andrew Wright Crawford, assistant city solicitor, Philadelphia; "The Problem of Extending the City Plan," by Major Joseph W. Shirley, chief engineer Baltimore Topographical Survey; "The Commission on the City Plan of Hartford, Conn.," by Frederick L. Ford, city engineer; "The English Town Planning Act of 1909," by Flavel Shurtleff of Boston.

In connection with the conference an exhibition of city plans was displayed in the rooms of the Chamber of Commerce, which attracted very favorable attention. As a part of the exhibit were many valuable reference books on city planning and congestion loaned by the Boston Public Library.

Only one business session was held, and that was of a somewhat informal nature, just prior to adjournment. The committee appointed to suggest a method for the future bringing together of experts in city planning made its report, through Mr. Frederick Law Olmsted, who stated that in view of the fact that other organizations, notably the American Civic Association, the American Institute of Architects, the League of American Municipalities, and the Committee on Congestion of Population in New York, were conducting departments designed to arouse a general interest in city planning, and were devoting much careful attention to the subject, it was not deemed wise to effect another permanent organization. It was, however, decided to hold another conference under the name of the "American Conference on City Planning," and those in charge of the Rochester conference, with others to be selected, were authorized to make plans for the meeting of 1911. It was decided to print in full the proceedings of the Rochester conference, and a fund partially to cover that expense was raised among the delegates. A cordial vote of thanks was tendered to the Rochester hosts, the newspaper press and to the Russell Sage Foundation for its assistance in preparing for the conference.

All in all, the Rochester conference was a memorable one, the good results of which will be more and more apparent as time goes on and the demand for concrete information increases.

The City Beautiful

Atlanta Moving in the Direction of Creating a Picturesque Plaza in its Civic Centre

One of the most important plans for making a city beautiful, and certainly a most unusual one, is the plan to convert the present Union Station site in Atlanta into a civic centre, constructing at that point a plaza. This plan, which is being enthusiastically backed by the Chamber of Commerce of Georgia's hustling capital, was originated by Architect Haralson Bleckley. It includes the bridging over of the railroads from Forsyth to Washington Streets, the laying out of lawns, walks and drives, and the erection on the site of the present Union Station of a commanding sky-scraper to serve as a city hall and for other public uses. The proposed plaza would be on a level with several important streets, and would constitute a civic centre of rare beauty, probably the equal of any to be found anywhere. The cost of this project is estimated at $4,000,000, and the co-operation of the State Legislature will be asked that the enterprise may be started at once and carried through to early completion. Atlanta is to-day the most beautiful as well as the most enterprising city in the South, and this improvement will still further accentuate its leadership.

Waltham is Moving

It Wants Other Industries than Watch-making, and Wants them Now

Waltham plans to increase its number of small manufacturers by forming an association to erect factory buildings, in which small industries can lease floor space and power. The movement is being fostered by the Waltham Business Men's Association. At recent meetings Secretary Child of Haverhill and President Bauer of Lynn have spoken of the work of similar organizations in the cities they represented. Waltham's principal industry for many years has been watch-manufacturing, but business in that line is so unsatisfactory that the Business Men's Association has been forced to consider the advantages accruing from a more diversified industry.

The Framework of the City

Essential Part the Railroads Play in the Development of the Modern Community. Problem that must be Studied from all Sides to Arrive at Intelligent and Beneficent Conclusions for the Future. Comprehensive Outline of Points to be Considered

By George R. Wadsworth, M. Am. S. C. E.
Consulting Engineer to Metropolitan Improvement Commission, Boston

An Outline.

I. The Problem.

First: The Dominant Issues—
- A Suburban traffic.
- B Local freight delivery.

Second: Its Immediate Importance—
- A The need of one flexible and enduring system.
- B The introduction of operating economies.

II. The Investigation.

First: The Point of View.
Second: The Scope.
Third: The Method.

III. The Analysis.

First: Differentiation of Distinct Classes of Service—
- A Passenger.
- B Baggage, express and mail.
- C Freight.

Second: Electrification.
Third: Passenger Traffic—Service Demands—
- A Unified vs. independent operation.
- B Through vs. terminal operation.
- C City distributing circuits vs. transfer stations.
- D Inter and intra system transfer.
- E Additional stations.

Fourth: Freight Traffic—Service Demands—
- A District system of delivery.
- B Transfer stations.
- C Additional stations.

Fifth: Prognostication—
- A The positions and relations of commercial and housing centres.
- B Traffic burden and direction.
- C Territory for the expansion of units.

Sixth: Operating Economics—
- A Initial.
- B Ultimate.

IV. The Plan.

First: Principles Underlying the Design—
- A Unification of physical properties.
- B Electrification.
- C Flexibility.
- D Joint control and operation.

Second: Method of Prosecution—
- A By joint railroad managements.
- B By a terminal corporation.
- C By municipal or state participation.

Third: Ways and Means.
Fourth: Operating Management.

The first chapter in the report, the heavy lines on the plan, the primary members in the city frame, must rightfully be dedicated to lines of transportation, the railroads.

The problems of congestion of population, co-operative housing, playgrounds and parks, civic centres, industrial development, and others of equally great importance, when not entirely independent of the question of transportation, must be considered as secondary thereto.

The outline presented suggests a few of the chief points which are believed to be essential for consideration in any exhaustive study and analysis of a terminal transportation problem.

It is not the purpose of this paper, even though time and space permitted, either to discuss the opposing aspects of the features under the various headings of the analysis, or to describe a general layout of the ultimate system, which it may be desirable to attain in the plan. These questions are all subject to consideration and discussion by eminent transportation engineers. Of more immediate importance than the actual determination of the various features of a terminal transportation system with their prescribed functions, and parts of the study which apparently have received little, if any, consideration in recent investigations, are the necessary and fundamental preliminaries—first, of concrete ideas as to what the problem really is: second, as to the method of pursuing the investigation and study to an issue where definite recommendations are warranted.

I. The Problem.

First: The Dominant Issues. The business of transportation within any terminal community entails the handling of through passengers to and from distant points, and the carrying of the working population between residences and places of business. These functions in instances are variously performed by the steam railroads, the rapid transit lines so-called, either elevated or subway, and the surface car lines. Terminal transportation also entails the handling of freight either in car-load or less lots through for trans-shipment or for local delivery.

The greatest burden on the lines performing passenger service is, and in all probability always will be, imposed by so-called suburban traffic. The question of handling through passenger traffic at terminals, although requiring physical features particularly adapted to its needs, is simple in comparison with that of handling daily to and fro the working population of a great centre. The necessary provisions for handling through freight, although essential to the terminal plan, are not important features as compared with the necessity for the prompt handling of freight for local delivery and shipment.

It may, therefore, be said as regards the dominant issues of the problem that they are:

A Suburban traffic. The means of carrying present and future generations of the working population of

great centres, safely, cheaply, conveniently and quickly, between commercial districts and housing communities.

B Local freight delivery. The means of handling with dispatch and economy, food stuffs, manufactured products, and raw materials for local delivery, for local shipment, or for trans-shipment.

As regards suburban traffic, the best system is one which provides for carrying the workingman direct, without transfer, from his home station to a station within walking distance of the factory or place of business. In the matter of freight for local delivery or shipment, the system which offers the greatest advantages to producers and shippers is one which provides for the receipt and delivery at terminal rates of package or car-load freight at the local delivery station nearest the place of business of the shipper or consignee.

The above conditions which it is desirable to attain or approach in the design of an enduring system of terminal transportation, viz.: The handling of suburban passengers direct, without transfer, and the delivery of local freight at the delivery station which entails the shortest team haul for the shipper or consignee, represent a more or less ideal state, which will be impossible of complete attainment in most instances, but which should be worked to.

George R. Wadsworth,
M. Am. S. C. E.

Second: Its Immediate Importance. It is interesting to consider for a moment why the question of terminal transportation is today receiving so much consideration within the respective confines of nearly all large centres in the country. The average present state within terminal communities, consisting of separate systems and their units, is the obvious and natural result of energetic and independent development by competing interests. These individual systems have been developed to a point of refinement as a rule consistent with, and in many notable instances in advance of contemporary requirements.

At the moment, consolidation in every conceivable line of business is being projected and consummated. Consolidation in the last twenty years has been most apparent among the railroad companies, and notwithstanding the possible adverse views of those now giving the subject serious consideration as to the advisability of further consolidation, it seems obvious that the psychological moment has arrived, and that it is now encumbent upon railroad managements, jointly or severally, to decide this question of policy, namely, whether further development within terminal communities is warranted along independent lines in order to perpetuate independent features in a terminal system of dissociated properties, or whether in the interests of public service as well as to effect ultimate operating economies, it is better to pool interests and plan for an enduring and unified system.

The greater or less degree to which the unification of terminal interests has been effected to date simplifies or makes more involved the problem to be solved as variously presented.

Were the terminal properties in any community now under joint control, the initiatory study would naturally devolve upon the unified railroad management, and the public through its representative commission would act in a supervisory capacity in approving the final recommendations for the plan. Under existing circumstances, however, in order to insure prompt action along proper lines, the public bodies must assume the initiative in the investigation.

There is no doubt that within the next ten years the necessary expenditures for the extension and reconstruction of terminal features alone, of existing transportation systems, will exceed the sum which has been expended in the last ten years on terminal features as well as on trunk line extension and improvement. The advantages to be gained by effective consolidation can hardly be overestimated, and it is essential that these necessary expenditures be authorized only after an exhaustive study of the situation with a view to the ultimate unification of the properties.

With the unified properties conducted under a fair management, which state of affairs can be assured by the regulations which may be imposed by state railroad commissions, or by special commissions, the benefits which will accrue both to the public, whose general advancement to such a degree depends upon the efficiency of public service corporations, and to the stockholders of the corporations, to whom the prosecution of business along lines of approved economy is vital, will be pronounced and lasting.

The immediate importance of the problem is due to the imminent need of plans for effective consolidation, in anticipation of possible independent development or extension by competing interests, in order:

A To provide one flexible and enduring system of terminal transportation which shall represent the most efficient type of public service, offering like advantages to all patrons.

B To introduce economies of management, operation, and maintenance of the properties—not possible under independent control—which will make for more efficient service and cheaper ultimate rates.

These statements should suggest a vast number of pertinent queries in the premises: as to the initial disposition of the burden of additional fixed charges, the practicability of eliminating competition within the terminal district, and the advisability of building so far to the future in any event. These questions are not pertinent to this portion of the paper even though time were available for their consideration, but are subject to careful analysis.

II. The Investigation.

The business to be studied is that of transportation. The experts on the subject as a rule are those now engaged in the business, and to whose energy and industry is due the present high state of the art. With few

notable exceptions, those who may be considered as experts on the subject of railroad terminal transportation, are in the employ of the railroad companies themselves. They are employed by and owe allegiance to corporations competing in a field dotted by other important interests, and at present doing business along competing lines. Their point of view as a rule is inconsistent with the aims of a study towards the eventuation of a plan for ultimate unified development. The point of view which at the outset must be acknowledged as the only one tenable, under existing conditions is incompatible with the attitude of most transportation experts.

The entire problem must be approached as a unit, and at the outset no recognition of corporate divisions can consistently be made. The advantages which may attach to one or another or several of the diversified railway terminal properties by virtue of territorial location or other interests, to the disadvantage of competing lines, must give way in the ultimate plan if such a course implies the greater good to the greater number. It is inconceivable in any bread study of the situation that the proposition should be attacked by territorial sections, or by corporate divisions.

The viewpoint must be at a pinnacle which will make possible a 360 degree view of the situation, and the study and analysis carried out to that final state which will demonstrate the absolute correlation between systems and units of the existing terminal lines and features themselves, and with public service requirements. This analysis should serve as a sound foundation whereupon a progressive policy will erect a comprehensive and enduring system in line with the demands of the highest type of public service, consistent with proper operating costs and economies of the unified properties.

Successful consolidations in the past only show that such a viewpoint has been chosen in each respective case, and that consolidations of business enterprises are in the main profitable to the stockholder as well as to the consumer.

In reality that which remains for the economic perfection of the diversified properties and interests, in themselves developed to a high state of efficiency, is the conservation of artificial resources by means of a comprehensive unification which shall eliminate elements of duplication involving vast annual outlays.

Second: The Scope. Of particular importance in connection with the study of the problem is the elimination from the minds of the investigators of any territorial or subject limitations which must confine the investigation. Before intelligent and definite recommendations are warranted, the study and analysis must be carried to a point which not only establishes the proper relation between the various arteries, with other functional units of the transportation systems themselves, but must as well consider contiguous and even remote features of the city plan. Although from a casual survey, local conditions territorially remote from the railroad properties may appear to have no bearing on the plan, a careful and exhaustive analysis will often demonstrate relations which are intimate.

It is believed that a study of conditions in almost every large city will disclose enduring features of a city plan conceived, prosecuted, and completed within the last decade, which, after a really exhaustive analysis of the entire situation, will prove to have been ill-timed as to their scope or location. Either through legislative enactment or by vote of the municipal bodies, the very [illegible] the investigating commission often curtails the scope of action of the body so appointed, and limits the investigation, study and recommendations to a treatment of the subject immediately in question. Under the circumstances rarely does a body so appointed take it upon itself to determine the relation, no matter how apparent it may be, which obviously exists between the proposed feature under immediate consideration and contiguous structures or territory.

It is furthermore manifestly unfortunate to assign to a commission or to any expert the study and analysis of one single system of terminal transportation, that is, either the present steam-railroad properties, the so-called rapid transit lines, or the surface car lines. The component parts of the problem cannot properly be isolated. There is a distinct and proper relation between the functions and physical properties of steam railroad properties and rapid transit properties, either existing or proposed, and until this relation is determined or prescribed, it is impossible, either in justice to the expert or Board of Engineers handling the problem, or to the tax-payers of the community, intelligently to recommend the proper lines of development. The entire problem must be considered and attacked as a unit, and the development of the system as a whole should entail the consideration of all transportation routes, and should not be confined to one system, however intimate points of articulation with other systems may be proved.

Third: The Method

The experts on the subject are in the main employed by the railroad companies. From them should come the real work on the study and plan. The proper point of view alone is lacking, and it therefore remains for a public body to outline the process of investigation, and to harmonize the diversified interests.

The obstructive or listless attitude of railroad managements, which frame of mind is often apparent in the face of studies or investigations by outside interests, must be overcome. It is only by the hearty and energetic assistance by representatives of the transportation companies that intelligent progress can be attained in the study, and this applies to a still greater extent in the evolution of the plan itself. The prevalent obstructive attitude is perhaps natural as the strategic advantages by virtue of which one or another trunk line has attained its position of prominence in a community have been gained by the untiring effort, energy and industry of the personnel of successive managements of the corporation, and it is natural that present managements should look askance at any suggestion which even remotely hints at the relinquishment of these advantages over competing lines.

To crystallize themselves the suggestions as to method in approaching and prosecuting the study and analysis of the problem prior to intelligent recommendations as to the ultimate plan of development, it is believed that the enactment providing for the appointment of the public commission should go further and provide also for the appointment of one representative from each railroad corporation having interests within the terminal district under consideration. These representatives should be appointed by the respective railroad managements, and should be the acknowledged experts in the field under consideration.

Perhaps no more definite expression can be found as regards the proper viewpoint of the board of rail-

road experts than that the problem should be undertaken as though the assignment came from the management of the combined interests, with instructions to develop plans for the ultimate effective consolidation of the properties, with a view to establishing an enduring system, susceptible of the greatest operating economy consistent with the demands of public service.

This departure of providing for an official body of railroad experts, who know the art and who are familiar with the field under consideration, will go far towards ensuring the elimination of impracticable recommendations, an element which, in the past, has limited the value of many exhaustive reports.

Upon the commission with its consulting engineers would devolve the duty of prescribing the general lines of the investigation and the analysis preparatory to the development of tentative general plans, and the study of alternate plans and estimates with all pertinent data, pending definite recommendations.

Except for continuing the salaries of these representatives, it is believed that the railroad corporations should not be asked to contribute anything towards the investigation, but that all expenses incurred in connection therewith should be paid by the state or municipality. In connection with the cost to state or municipality of conducting investigations towards a plan for unified railroad terminal development, the term "economy" should not be confounded with that of "initial expenditure." Appropriations for the purpose of conducting these investigations are strictly in line with ultimate economy, and those disclaiming proposed expenditures for this and like purposes are actuated by principles of false economy.

There is little doubt that the thousands or even hundreds of thousands of dollars of expenditures which may be incurred by states and municipalities within the next few years for the purpose of intelligent and thorough analysis of this problem will return many fold to coming generations, who, instead of wondering at the lack of foresight of their progenitors in allowing development along lines of least resistance, will commend the judgment of those who, foreseeing the needs of the future, provided for the laying down of an ultimate and enduring system of terminal transportation for the betterment of the commercial and housing interests of the community, and the general welfare of the inhabitants.

Model Farms

Minnesota Federation of Commercial Clubs is Organizing Them.

The Federation of Commercial Clubs of Minnesota has inaugurated a practical step in the "back to the farm" movement. Each commercial club adopting the plan will select a farm near its own location, make satisfactory arrangements with the owner to surrender the supervision of it for at least three years, and will make the selection with a view to obtaining one that will be representative of the locality in size, kind of soil and type of farming followed. The aim is to conduct this farm, keep the accounts, and otherwise "farm" scientifically under the supervision of an expert to be provided by the State Agricultural Department. The experts from the State Agricultural College will give instruction to the neighboring farmers from time to time, and at all times the farms shall be open to inspection by those interested. It is expected that the work of reorganizing farm methods can be quickly done in this manner. There has been an instant response to this plan, as very many of the organizations throughout the State have already filed applications for these model farms.

In Worcester's Footsteps

Springfield Investigating the Magazine Field for its Board of Trade

The Springfield Board of Trade has abolished a committee known as the New Enterprise Committee, and appointed a new committee of ten members to be known as the Industrial Committee. With enlarged powers, it will be the special duty of this committee to make a study of what the city needs industrially to bring about better conditions for the economical manufacturing of goods. A special committee, at the head of which is Frederick J. Hillman of the Worcester Board of Trade, is investigating the matter of establishing a board of trade magazine similar to the Worcester Magazine.

Buffalo's Bulwarks

The Buffalo Chamber of Commerce and Manufacturers' Club are raising a fund of $100,000 to organize a conventions bureau, a new industries bureau, and other "bulwarks" necessary to the foundation of the new Greater Buffalo.

Making Merrimack Navigable

The results of the recent work of Col. Edward Burr of the United States survey have stirred the boards of trade in the Merrimack Valley to renewed activity in the matter of making the Merrimack River navigable, at least as far as Lowell, by sea-going vessels. The report of Colonel Burr indicates that eventually the navigable portion of the river may be extended to Manchester, N. H.

Salt Lake City's Creed

The Commercial Club of Salt Lake City, Utah, is embarking on a campaign of "community advertising," following the example of many other Western cities. The letter which they have addressed to the business men of the city contains this pledge, at once concise and comprehensive:

"I hereby agree to study Salt Lake City;
To talk Salt Lake City;
And to work for Salt Lake City."

Forty Thousand Club

Ten years ago Madison, Wis., saw the organization of the Forty Thousand Club, whose members were pledged to bring the population of the city to that mark. Having practically accomplished the task of doubling the city's population in this short time, the club has been succeeded by the Madison Commercial Club, organized May 3, 1910, with a membership of 100.

Salt Lake's Commercial Club

Salt Lake City, Utah, rejoices in the completion of the new building of the Commercial Club, which that thriving organization expects to occupy by July 1.

A Good Citizen

Gen. A. B. R. Sprague had Proved his Citizenship on the Field of Battle and in the Paths of Peace His Passing Removes from this Board and this City a Power that Made for Patriotism, Prosperity and Progress

IT HAS been well said that "death loves a shining mark," and when the city of Worcester, the State of Massachusetts, and his old comrades in arms learned on the 17th day of May that Augustus Brown Reed Sprague was no more, the universal regret that was everywhere and instantly manifested testified again and more eloquently than human pen can portray the sad truth of the familiar phrase.

At the age of 83 years, 2 months and 10 days, General Sprague went, still in the plenitude of his powers, to his well-earned rest, and on the 20th of May, in the Church of the Unity, which he had long attended, hundreds gathered to pay their last visit and gaze for the last time on the face of their beloved friend.

A. B. R. Sprague was born in Ware, Mass., March 7, 1827, the son of Lee and Lucia (Snow) Sprague. He was a lineal descendant of William Sprague, who was associated with Governor Endicott in founding the Massachusetts Bay Colony in 1628. His grandmother was a descendant of John Alden, and his grandfather of Constance Hopkins, both members of the company of the "Mayflower."

Educated in the public and private schools of Ware and East Douglas, circumstances compelled him to abandon his preparations for college, and in 1842 he came to Worcester, entering the employ of H. B. Claflin, who afterward became the great New York merchant. Not long after he became associated with his father in the grain business under the name of Lee Sprague & Company.

GEN. A. B. R. SPRAGUE

At the age of seventeen he joined the Worcester City Guards, and evincing an aptitude for the work of the militia, rapidly rose from the ranks to the position of Adjutant of the Eighth Regiment, later becoming Major and Inspector on the staff of the Commander of the Fifth Brigade, Third Division, Massachusetts Volunteer Militia, which position he held at the time of the attack on Fort Sumter.

At the first call of President Lincoln for troops, he was unanimously elected to the captaincy of the Worcester City Guards, known thereafter as Company A, Third Rifle Battalion, commanded by Major Charles Devens, Jr. Major Devens' command left for the front April 20, 1861. In July, 1861, Major Devens was appointed to command the Fifteenth Regiment, and as senior officer, Captain Sprague commanded the battalion until it was mustered out in August. He immediately took an active part in the organization of the Twenty-fifth Regiment, Massachusetts Volunteers, of which he was made Lieutenant-colonel. When this regiment was ordered to the front, Colonel Sprague was presented a magnificent sword and belt by the men of his old command, and by friends in civil life a valuable horse and equipment.

This regiment saw much active service, and Colonel Sprague was officially commended "for bravery and efficiency in the battles of Roanoke Island and Newberne." On November 11, 1862, he was promoted, and as Colonel at once took command of the Fifty-first Massachusetts Volunteers. Immediately after the battle of Gettysburg, although its term of service had expired, he offered the services of the regiment to Secretary Stanton, who gladly accepted the timely offer, and the regiment remained in the field until Lee had been driven back into Virginia. Colonel Sprague was then requested by Gov. John A. Andrew to recruit and command the Fifty-seventh Regiment, but illness in his family compelled him to decline this offer. A little later he again offered his services, and February 1, 1864, accepted a commission as Lieutenant-colonel of the Second Heavy Artillery, which was already in the field. With this command he gained added honors, remaining with it until it was mustered out on September 20, 1865. "For gallant and meritorious services during

the war," he was brevetted Brigadier-general, to date from March 13, 1865. During this long service of three years and nine months, he gained the approbation of his superior officers and earned the life-long regard of his comrades in the service.

In 1867 General Sprague began a career in public life which continued for twenty-five years. He gave up the position of City Marshal, which he had held for a short time, to accept an appointment as Collector of Revenue for the Eighth District of Massachusetts.

In 1871 he succeeded the Hon. J. S. C. Knowlton as Sheriff of Worcester County, and by successive re-elections continued in this office until 1890. During this long period he instituted reforms in the conduct of the two prisons under his control which attracted much attention to his administration. General Sprague gave his services to the city as a member of both branches of the municipal government, and for two terms (1896-97) successfully directed city affairs in the capacity of Mayor. During this time much new construction was undertaken, notably our present City Hall and several school buildings. As an ex-officio member of the Building Committee, he took a great interest in the erection of the City Hall, and gave much of his time to it until it was completed.

General Sprague was for several years the Treasurer of the Putnam & Sprague Company, engaged in the furniture business. He took an active part in the development of several of the larger corporations of the city, and at the time of his death was President of the Worcester Electric Light Company, of which he had been a director from the start. He was also President of the Mechanics Savings Bank.

His administrative ability and business acumen always made him valuable to Worcester's business life.

December 23, 1846, General Sprague married Elizabeth Janes, daughter of Samuel and Eliza Shepard Rice, who died February 20, 1889. Of this union the following children were born: Samuel Augustus, William Augustus, Josephine Elizabeth, Carrie Lee and Fred Foster. None of these survived him. Josephine Elizabeth married Edward H. Knowlton and left one son, Howard Sprague Knowlton, who is the only grandchild.

October 23, 1890, General Sprague married Mary Jennie, daughter of William C. and Martha Kimball Barbour of Worcester, who was at the time Assistant Librarian of the Worcester Public Library. Their only child, Alice Alden, was born September 11, 1893.

Of the many things in which General Sprague was interested, undoubtedly the paramount was the Civil War with its aftermath of glory and sadness, of joy and national pride. His last illness was undoubtedly aggravated by his attendance at a meeting of the Military Order of the Loyal Legion, to which he was greatly attached. He was a charter member of the Massachusetts Commandery L. L., served as Junior Vice-commander in 1868, and as Commander in 1908.

He was active, too, in the Grand Army of the Republic, and served early as Commander in the Department of Massachusetts. Later in 1873 he was appointed Quartermaster-general of the Grand Army by Gen. Charles Devens. Post 24 of Grafton was named after General Sprague. He always took particular interest in the regimental organizations in which he had served, and found time to gather together much interesting material, and although he never laid claim to literary ability, the papers which he prepared have great historical value and are carefully preserved.

A man of striking personality, his carriage attracted instant attention. With the unfailing courtesy of the gentleman of the old school, the inborn dignity and modesty with which he met all classes of people made him ever a model to the men of the younger generation. Many men who are today successful in their chosen vocations look back to the time when the friendly word and delicately tendered assistance of General Sprague renewed their courage, and his helping hand guided them safely through the pitfalls which seemed to balk their progress. Loth to believe ill of anyone, his staunchness in defending his friends when foes assailed, bound them closely to him, and probably few men in the city had so large a circle of sincere admirers.

Although he endeavored to conceal his charities, hundreds of his old comrades-in-arms and many of the men who had been in the prisons under his charge, could testify that his purse was always open to the needy. Many are the stories told of the big-heartedness of the man, and to the expostulations of his friends when they expressed their fear that he was being imposed upon, he would reply, "You can't tell. Perhaps they need it." The thought of physical suffering was abhorrent to him, and the next call for assistance would meet with the same open-handed generosity.

Although he knew at times that certain men were hostile to him, his generous nature would not allow him to carry thoughts of revenge, and he would meet them with the cordiality which always marked his reception of friend or enemy.

He was a welcome guest at the social gatherings of young men or old, for he loved the social atmosphere, and he was not afraid to indulge temperately and in reason in all the good things of life. Somehow he seemed never to have lost his youth, and even after his eightieth birthday was younger in act and thought than many men a third his age. He made an admirable presiding officer, and had always a fund of stories which provoked a laugh but never carried a sting. So, too, in his business ability he retained to the last his youth and progressiveness. Endowed with unusual foresight in business matters, able to grasp all the details of every business with which he was connected, his remarks at board meetings were always listened to with respect and his opinions had great weight.

Whatever he could do to advance the interests of his home city appealed to him strongly, and he could always be depended upon to give active assistance in any movement for civic betterment, civic development, or civic righteousness.

Anything of a historical nature attracted him instantly. His favorite recreation was to delve into the records of the past and assemble facts unusual or not commonly known. He left many unpublished papers which he had written upon historical subjects. The Sprague and Hopkins families were largely indebted to him for his genealogical researches.

Able, tactful, generous, a friend to rely upon, a splendid type of the American gentleman, self-made, self-reliant, successful, his passing brings a sense of personal loss to a host of friends. With Worcester, the nation mourns the loss of an energetic, valiant leader in the Union cause, an honored citizen, who considered no sacrifice too great if city, State or nation could be benefited thereby.

Part Y. M. C. A. Plays in City's Life

What it is, What it Has Done, What it is Going to do for Worcester Cogently Told by its President Its Symbol, the Triangle, Bodies Forth its Aim, its Aspirations, its Achievements Some Appropriate Pictures

By Frank H. Robson

THE forces which conserve the life of the country may be classified as religious, educational, social, and industrial. To strike deep into the conscious purposes of our individual and general development, any institution must wield firmly and effectively one or more of these elemental forces. The church, the school, the home, the shop and the farm have proved great conservators of our national life. One institution represents one fundamental influence more largely; others represent another. The breadth of its influence forms the foundation for the growth and success of the Young Men's Christian Association. As an institution partaking of all these elements it finds a large and ever-increasing field of labor and influence.

Frank H. Robson
President

Department Heads

Standing—
Jos. B. Shaw, Assistant Physical Director
W. C. Muth, Railroad Secretary
William P. Taylor, Educational Director
Hugh C. Leggat, Boys' Work Director

Seated—
Edw. W. Wilder, Physical Director
Chas. R. Chase, Assistant General Secretary

F. L. Wills
Secretary

The growth of the Association movement in this country has been little less than phenomenal: the membership has reached 465,000, a third of whom belong to the ranks of industry. During the year 1909 sixty-one buildings were erected or enlarged, at a cost of $6,800,000. The property of the Association is valued at $66,500,000, and new buildings are now assured or under way which will cost $10,600,000. Detroit has just finished a new building at a cost of $750,000; Indianapolis one at $450,000; Portland, Oregon, one at $416,000, and Milwaukee an addition at $250,000. Boston has just raised $610,000 for a new building in a most notable campaign. Towns and cities near Boston have raised an equal amount to build new buildings or pay off indebtedness. For example, Lowell has just raised $175,000, Newton $160,000, Beverly $100,000, Chelsea $95,000. Among the assured new buildings may be mentioned three for Pittsburg, costing $1,250,000; one for San Francisco, at a cost of $710,000; and one for Pittsfield, Mass., costing $170,000. The current expenses of the Association at large total $7,500,000 per year.

Well-organized divisions of work are the following: City Associations, Army and Navy, County, Student, Industrial, Railroad, Immigrant, Colored, Mining, and Foreign. Each department has a wide and ever-increasing field of labor. Sixty men, elected at the Triennial Convention, form an International Committee with advisory powers. Forty state and provincial committees foster the work in various states and provinces.

Each local association, however, is independent in its action and standards.

The Association in Worcester was organized June 14, 1864. Throughout its history it has been fortunate in enlisting the cordial sympathy and earnest support of some of Worcester's strongest citizens. Such men as Joseph H. Walker, Albert Curtis, Philip L. Moen, Charles F. Washburn, F. B. Knowles, Rev. W. R. Huntington, Isaac Davis, Judge F. H. Dewey, Sumner Pratt, John D. Washburn and many others now gone builded well and left a noble heritage of example and a high standard of unselfish service for the men of Worcester.

A board of twenty-one men selected by the active membership assumes the management of the Association and has supreme and final authority in all matters of policy.

A board of five trustees holds the property and the invested funds.

Baths at 10 Elm Street

Boat-house at Lake Quinsigamond

Prescriptive Work

The Worcester Association has had the services of some able men in its employ. Since 1870, when Aaron F. Greene performed the duties of Secretary, the force of employees has been from time to time enlarged to meet the increasing demands of the work. A general secretary, assistant general secretary, physical director, assistant physical director, boys' work director, educational director, and membership secretary, all find ample fields for their labors. Further, the day is past when such positions can be adequately filled without serious and prolonged preparation. Schools for teaching scientifically the needs of men and boys and the best methods of approach exist for men who are looking forward to this kind of professional service. The Springfield and Chicago Training Schools are notable examples. Five summer training schools add materially to the opportunities for study, both for those already in the work and those beginning. Expert service in this as in other lines is required for success.

With the exception of a short period following the Red and Blue Contest in 1896, the present membership of 1588 is the largest in the history of the Worcester Association. The fact that twenty-four nationalities, forty-four vocations, and fifteen religious societies are represented shows that the Association appeals to all classes of our people. The Association exists for the boys and men of the community, and naturally develops along the logically extending lines of such needs, broadly interpreted. The triangle with the three sides labeled body, mind and spirit is not merely a fanciful sign. It furnishes the continual suggestion that man is a unit; that he has various phases of life; that these phases are inter-related and inter-dependent; that the development of any one makes the growth of the others more important; that one phase cannot grow to any degree while the others decay, and that the sound ideal is complete, well-rounded development of the whole man.

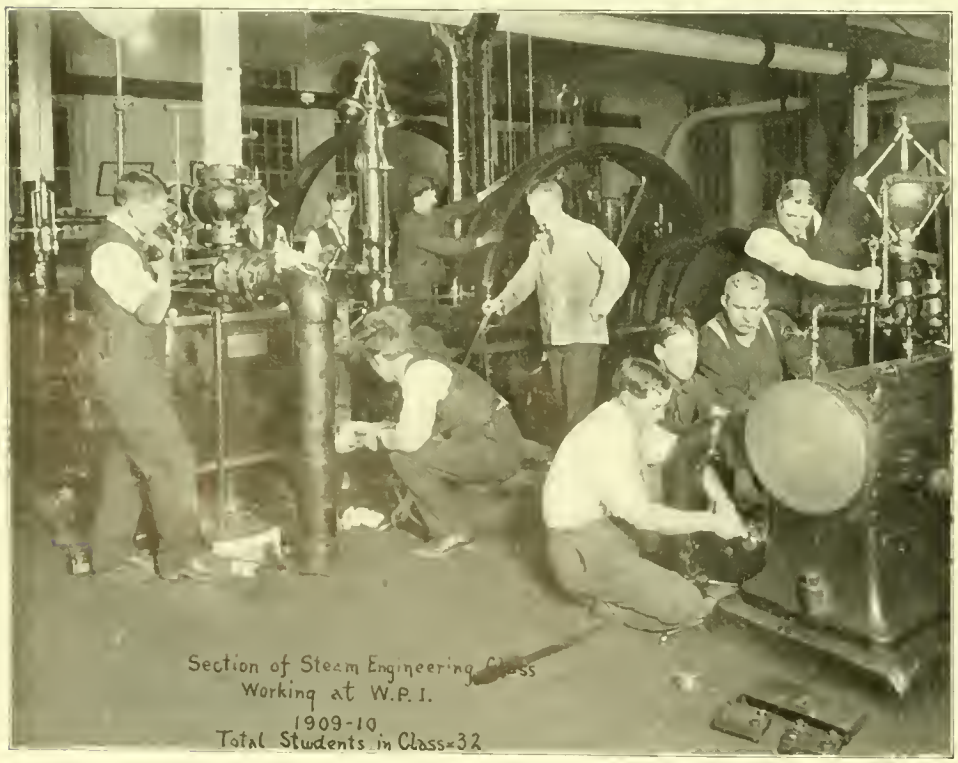
The Association is not a church, yet it is a religious institution bringing the Gospel of Christ ever before all men as the only safe foundation of life. The Association is not a gymnasium, yet it believes that every man must perfect and conserve his physical powers to do his best and largest work in the world. The Association is not a school, yet it believes that any additional development of the mind of man and of facility in the use of its powers means a larger enjoyment of life and the filling of a larger place in industry and society. The Association is not a home, yet it supplies to many a boy and man a substitute therefor, and gives to him the sense of social companionship and brotherhood. These principles, sanely and broadly employed, justify the work and find a ready response in the judgment both of the membership and the community. Hence it is that President Taft, when he opened the doors of the new Memphis Association building, well said: "The money that is invested here is invested well. We are fortunate in this day to have such an institution officered as it is by men who know their business, the business of caring for men and boys. I do not know of opportunities for the investment of money that can offer larger and safer returns to those who, in their investments, would help their fellow men." And Secretary Elihu Root declares: "While in these days of greater opportunity there is more danger than ever to the young man in the business life, the Young Men's Christian Association is grasping the problem with wonderful appreciation of conditions as they exist. The Association seeks to open the door of opportunity to the young man and make him a good and useful citizen, a noble and useful man." And William J. Bryan,

after traveling around the world, concludes: "I should say civilization is the harmonious development of man, mentally, morally and physically, and that the Young Men's Christian Association is more nearly approximating this development than any organized institution that I know of, for it develops a well-rounded, threefold man. No single word in its title is superfluous. The spirit of Christianity is behind all that is working in the Association." Similar statements might be quoted from General Leonard Wood for the army work, from Admiral Schroeder for the navy, President Woodrow Wilson for the student, ex-President Roosevelt for the men of the Panama Canal, Bishop McDowell for the church, and W. C. Brown, president of the N. Y. C. R. R., for the railroad men.

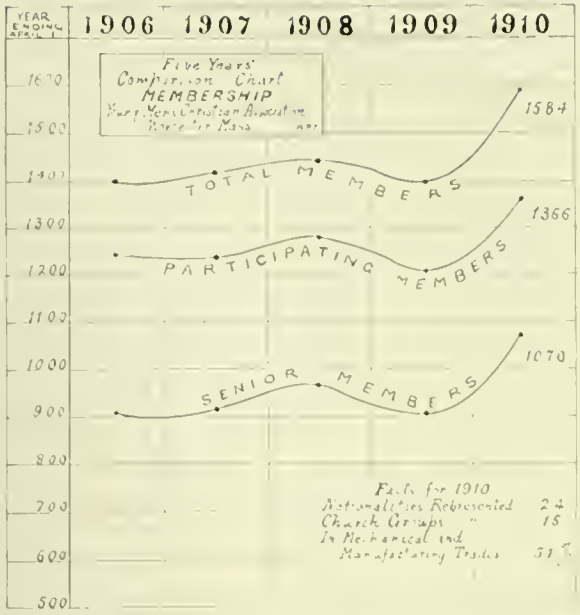
The Worcester Association with 303 men in educational classes is in line with the work of the other 50,000 men who are studying and working through the equipment of the other associations of the country. To train the untrained and to develop skill in the unskilled, to help the man already in a trade to fit himself either for advancement or to change to another trade, and to permeate the work with suggestions of the value of good companionship, clean living, commercial honor and Christian standards, makes an ample field for the educational department. To add one dollar per day to a man's working efficiency means, when capitalized at 4 per cent., lending to that man for life the sum of $7500 as a working capital without interest. This is a service to the city of no mean importance, adding, as it does, so largely to the assets of the community. The automobile school, business law, electricity, drafting, steam firing, engineering, pattern-making, woodworking, summer school for boys, with an educational equipment valued at over $5000, offer suggestions of the scope of this work in Worcester.

The physical department is a strong feature of every well-organized Association. To prescribe scientific muscular training for the conservation and increasing of the physical vigor, and for the control of the physical resources so that the body may be not only the ready, strong servant of the will, but its stimulating agent, is an important and useful work to individuals and to the community. Public hygiene, sanitary conditions of life and work, wholesome and clean sport, all fall within the range of its influence. There have been 1093 men and 370 boys using the privileges of the Worcester gymnasium and boathouse, with a total attendance of 68,385, the largest number for any year in the history of the Association. Prescriptive work in cooperation with the physicians of Worcester, and personal examinations by the Director, form a large feature of this work.

The boys' department, with a membership of 322, is a leading feature of the Association work. With its branches for high school boys, employed boys and junior



IN THE WORKSHOPS



boys, its extension work both within and without the city, its educational and social work, its athletic teams and its Bible classes, every phase of the life of the boy is touched. It gives to the boy splendid activities and worthy standards during the years of his greatest susceptibility, his most rapid growth and his fiercest temptations. No other agency adequately meets his needs. It supplements the good home, the church, the school and the club. It may well be said that this department epitomizes the highest ideals of the Association by pre-occupying the boy's life, giving an ideal of service offering wholesome sport, and inspiring a devotion to the common hero of strong boys and loyal men throughout the centuries. Here formation rather than reformation finds its fullest expression and does its completest work.

Fundamentally the Association is a Christian institution, based firmly upon accepted Christian truth. It openly confesses its allegiance and boldly declares that all its work must be in logical consonance with Christian living and thinking. Sunday afternoon meetings in Association Hall have had an average attendance of 138. Regular noonday and midnight meetings in ten of our largest shops, with a total attendance of 6121 men, and an average per meeting of seventy men during the winter, carried the message of truth and inspiration. Thirty-six people assisted in these services of brotherhood.

The Lake Department has been open for about twenty years, its season extending annually from May to September. The boat-house has a complete equipment. All the privileges of rowing, canoeing, sailing and swimming, with all the social features of a club house, are furnished to the members of this department.

The Association largely supports a worker in the Association of Tientsin, China.

About two years ago, at the request of the Railroad Men's Club, the railroad branch was organized with rooms at the Union Station. Its membership has not been large, but its service has been of great value. Its work promises growth and is appreciated by the railroads themselves and by the men.

The Woman's Auxiliary for many years has been a most important feature of the Association. Devoted women have given without stint both of their labor and of their means to provide entertainment, equipment and financial assistance.

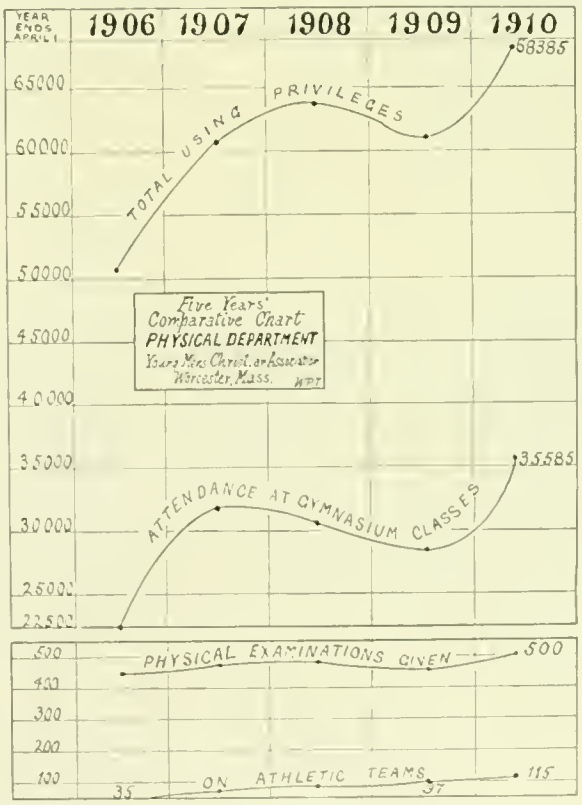
The working force of the Association, the General Secretary and his assistants in the various departments, give vitality and power to all the conscious efforts of the Association, and by personal contact and inspiration transmute all into life and service.

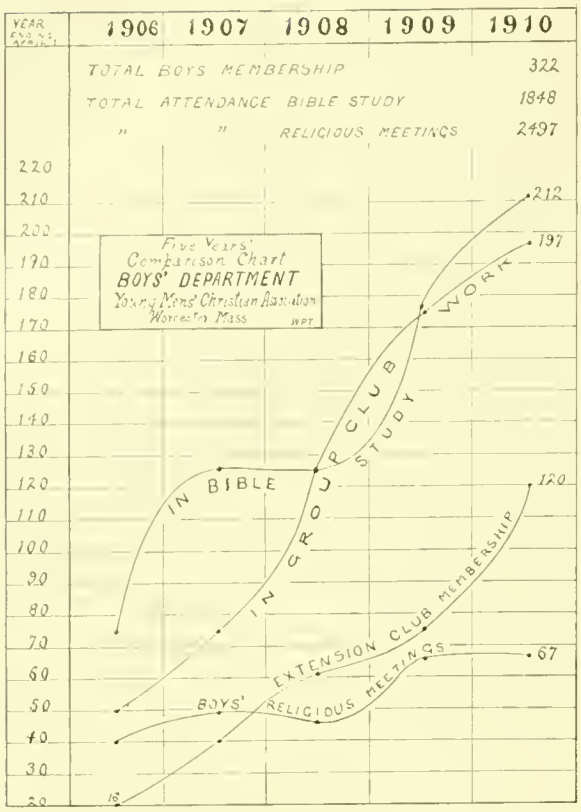
The Association gladly contributes its help to any and all of Worcester's worthy enterprises. Charitable committees of all kinds, church and religious organizations, benevolent societies seeking the good of Worcester's men and boys, find faithful and valuable help in the resources and professional knowledge of the Association forces.

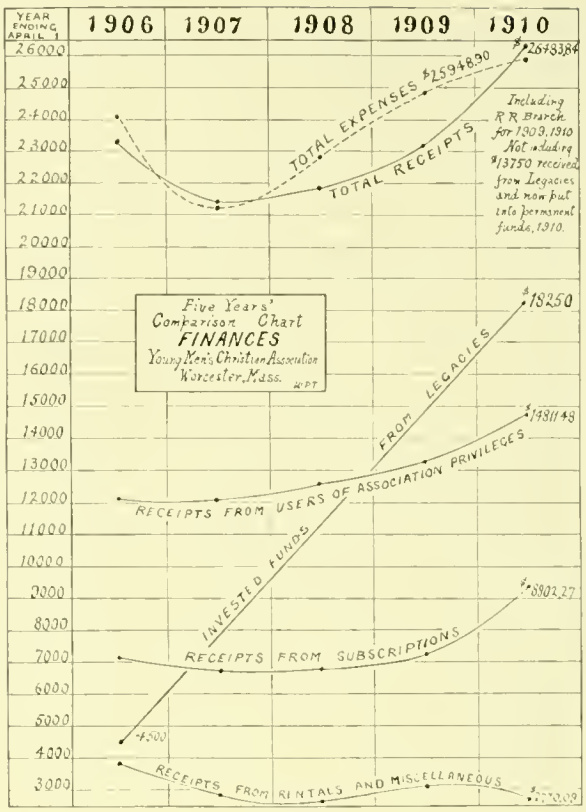
As a public institution, supported in part by the gifts of a generous public, it is proper to speak of the financial conditions. The building and equipment are worth approximately $200,000. Of the $25,090.01 received for the year ending March 31, $7,898.02, or 31½%, came from subscriptions, 68½%, or $17,191.99, from within the Association as rents, fees, collections from religious meetings and income from invested funds. The current expenses for the year were $24,551.23, leaving a balance of receipts over expenses of $538.78. These figures indicate a generous confidence on the part of the public of Worcester and a desire to see the work of the Association amply sustained.

A total of $13,750 from the estates of J. D. Rice, Charles D. Tucker, Horace A. Young and Eliza D. Dodge was added to the permanent endowment during the past year. These funds, with others, are held and invested by five trustees, to which board as a fitting continuation of their good and faithful service, Charles G. Washburn, Mayor James Logan, Henry H. Merriam, George C. Whitney and E. Avery Brewer give their time and thought.

The Association has occupied its present building for twenty-five years, and in that time has made no material







addition to its facilities for work except the boat-house. Meantime the city has grown from 70,000 to nearly 150,000 and the membership of the Association has grown from 850 to 1588.

In view of the larger opportunities here and in the light of the well-equipped buildings which provide dormitories for their members as well as other splendid facilities for work throughout the country, the question of an adequate building in Worcester must soon force itself upon the consciences of the generous people of our city.

The Association is the handmaid of the Church; it receives constant inspiration from religious truth, its workers are continually recruited from the Church people, and its standards are determined by the best judgment of its Church membership. It aims to return to the service of the Church boys and men, better, stronger, more able to plan wisely, and serve largely both the Church and the Church interests of the community. It aims further to teach men and boys to live moral, clean, wholesome lives, to develop honorable careers, to serve nobly their business, their homes, their Church, their city and their country. It may still be said as was once said by our honorable Mayor, "The Young Men's Christian Association, that strong right arm of the Christian Church, endeavors to set before men correct standards of value. Its charter is God's Word, and working under that charter it aims to produce men of worth, sound of body, strong of mind, clean of life and Christ-like in character. This is the type of man of which the world stands in need, and whose value to our city, the State, or to the nation cannot be measured by the standards of earth. Who can estimate the worth or influence of such a man upon the great problems of statecraft, industry and philanthropy which press for settlement at the opening of this new century?"

Lake Mohonk Conference on International Arbitration

By Charles T. Tatman

THE Secretary of State, the Hon. Philander C. Knox, authorizes and directs me to say officially that the responses to the identic circular note have been so favorable and manifest such a willingness and desire on the part of the leading nations to constitute a court of arbitral justice, that he believes a truly permanent court of arbitral justice, composed of judges acting under a sense of judicial responsibility, representing the various judicial systems of the world, and capable of insuring the continuity of arbitral jurisprudence, will be established in the immediate future, and that the third peace conference will find it in successful operation at The Hague.

IT is significant of the importance attached to the Lake Mohonk Conference on International Arbitration that Secretary Knox made the sixteenth of those conferences the occasion of the above momentous announcement on May 19, 1910.

No more appropriate herald could have been chosen than the bearer of these glad tidings, Hon. James Brown Scott, solicitor for the Department of State of the United States. Mr. Scott has represented our government at The Hague conferences and has struggled on those occasions, and all the year round for many years, for the establishment of a permanent court of international justice. Our country has always taken the lead in this great cause, and has been regarded by the peace lovers of other nations as its logical exponent. The comparatively isolated position of this nation among the great powers of the earth has absolved it from the suspicion of any purely sellish or ulterior motive in its efforts for building this great engine for the peace of the world, namely, the permanent international court.

Six sessions of the Lake Mohonk Conference were held, two daily on May 18, 19 and 20. The meetings took place as usual at the Lake Mohonk Mountain House, a splendid hotel on the shore of a beautiful lake in the foot-hills of the Catskill Mountains in New York State. They were attended by more than 400 delegates, of whom about 50 represented various business organizations from all parts of the United States and our insular possessions.

The presiding officer at all the sessions was President Nicholas Murray Butler of Columbia University. Dr. Butler made a most powerful address in assuming the chair. Among the many speakers some of the most prominent were: Dr. Paul Ritter, minister to the United States from Switzerland, who spoke on "The Future of Aeronautics from an International Point of View;" the Very Rev. W. Moore Ede, dean of Worcester Cathedral, England, who was the leader of the English clergy on their peaceful mission to Germany last year; Mr. Masujiro Honda, an official of the Japanese government; Hon. H. B. F. MacFarland, recently commissioner of the District of Columbia; Hon. Simeon E. Baldwin, formerly chief justice of the Connecticut Supreme Court; Hon. Charles H. Butler, reporter of decisions of the United States Supreme Court and one of the American delegates to the second Hague Conference; President Emeritus Charles W. Eliot of Harvard, who made one of the most practical and contributing addresses; Hon. W. L. Mackenzie King, minister of labor in the Canadian Cabinet; Rear Admiral J. B. Murdock of the United States Navy; President S. C. Mitchell of the University of South Carolina; Hon. William Jennings Bryan of Lincoln, Nebraska, and St. Clair McKelway, editor of the Brooklyn Eagle.

A feature of the Friday morning session was the presentation of the prize of one hundred dollars offered by Mr. C. D. Pugsley, for the best essay by a college student on the subject of International Arbitration. The winner was George Knowles Gardner of Worcester, a sophomore in Harvard College. Mr. Gardner made a very graceful response to the presentation. Seventy-five essays had been submitted in competition, by as many students.

The conferences at Lake Mohonk were founded by Mr. Albert K. Smiley, and are carried on at his sole expense. One of the happiest events of the conference was the address made at the close of the last session, in which Mr. Smiley reviewed the work done, commented upon the various speakers and their addresses, and pronounced the sixteenth to be the best conference ever held at Lake Mohonk.

These meetings have always been characterized by a sane and practical spirit, and they have accomplished a great deal in the ultimate cause of peace by forming public opinion in favor of a workable plan for securing peace, namely, through the arbitration of disputes between nations, and the establishment of a permanent court ready at all times for the submission of cases. The spirit of the Lake Mohonk institution may be understood well by a reading of the following platform, unanimously adopted:

The Sixteenth Annual Lake Mohonk Conference on International Arbitration congratulates the people of the United States on the marked progress which the past year has witnessed in the age-long struggle for the substitution of the reign of law for the reign of force in international affairs. It notes with deep satisfaction the significant announcement of the Secretary of State that the proposed constitution of the International Court of Arbitral Justice recommended to the powers in his identic circular note of October 18, 1909, has been received with so much favor as to insure the establishment of such a court in

(Continued on page 184.)

The Howe Memorial

A Beautiful if Tardy Acknowledgment of the Greatness of one Family which Added Undying Lustre to the Region within Worcester's Sphere of Usefulness and Made a Material Contribution to Human Weal

OF ONE family, born in the same house in Spencer, Elias Howe, Jr., inventor of the sewing machine; William Howe, inventor of the truss bridge, and Tyler Howe, inventor of the spring bed, constitute a trio who, by reason of the far-reaching benefits of their contribution to the human weal and their close relationship, make them unique among all the families in American history.

The story of Elias Howe, Jr., struggling against poverty and adverse circumstances, working by candle-light in a dim attic to perfect a machine which would lighten the burden of labor of uncounted millions, is the story of a genius who refused to recognize defeat—a story of persistence in effort that won a well-merited success.

What must have been the exultation he felt when the inspiration to put the eye in the point of the needle and a shuttle underneath had resulted in the production of the first lock-stitch! Up to that time (1846) his life had been one of unending self-sacrifice, and now he became involved in legal tangles which threatened to deprive him of any financial return from his great invention. Then the elder Elias Howe came to his son's aid, the old homestead was mortgaged, and with this aid, Elias Howe, Jr., won his battle in the courts and was recognized as the true originator of the sewing machine.

Wealth poured in upon him, and honors too, but when the Civil War broke out, he shouldered a musket and went to the front as a private, spending his money freely to aid the Union cause and even, on occasion, paying off his regiment. He died in Brooklyn, N. Y., in 1867, at the early age of 48 years.

THE HOWE MEMORIAL AT SPENCER

William Howe invented the truss bridge, one of the most needed contrivances of that period. Railroads were in their infancy and predictions were freely made that they would never be extended beyond the big rivers, as the cost of masonry bridges would be prohibitive and no other kind was known that would stand the strain. These tales reached William Howe, then a comfortable innkeeper.

Back to his boyhood days his mind traveled, and the recollection came to him of the roof timbers in the old church at Brookfield which he had attended. From this memory he evolved what to this day is known as the Howe truss; the Boston & Western Railroad triumphantly spanned the Connecticut at Springfield with a wooden bridge of his construction; and the fame of Wm. Howe extended even to far-off Russia, where he was called to superintend the structural work of the railroad between St. Petersburg and Moscow. He was born in 1803, and died in Springfield in 1852.

While the invention of Tyler Howe was of less importance than the two just described, yet the beds upon which the people of civilized nations recline, nearly all pay tribute in some form or other to his idea of the spring bed—an idea born of the great discomforts which he endured as one of the Argonauts of '49, in the long voyage home from California. Tyler Howe died in Cambridge, full of years and honors, in 1880.

Few small towns in this or any other county can boast such tripersonal genius as this, and Spencer honored herself as well as the master minds she celebrated when she unveiled, last month, the beautiful memorial designed by Paul Winters Morris, illustrated above.

The City at Play

Dead Horse Hill Climb, the Annual Runtogether of the Automobilists of the East on One of the Stiffest Ascents in the Country, Depicted. Worcester Automobile Club Scores Another in its List of Continued Successes

A VISION of a swaying, skidding chassis, a kinetoscope glimpse of a big "14" and a plucky, determined little driver; a swirl of dust that hid the onward course of the machine; and then, with hardly a moment's pause, the announcer's voice saying, "Time of car number 14, 58 seconds."—only this and nothing more constituted the star event of the Dead Horse Hill climb Saturday afternoon, June 4.

Caleb Bragg was the man who turned the trick, driving his big Fiat car to the summit of one of the stiffest grades in New England in two seconds less than a minute.

This mark of 58 seconds for a gasoline car, one second better than last year, was the feature of the climb. Thousands of people, many of them from distant States, lined the sides of this narrow and tortuous hill road on that beautiful summer afternoon and cheered the winner as he crossed the finish line.

Cars of all styles and makes and horse-powers were parked like artillery on the hill, and the military aspect of the day was still further accentuated by the Gatling-gun-like explosions of the exhaust as the drivers topped the hill and started their machines for Leicester after they passed the judges' stand.

The racing machines entered were many of them nationally famous. The Alco, which won the Vanderbilt cup last fall, and its driver, Harry Grant, were a centre of interest. So, too, was the big Fiat, albeit its driver kept in the background as much as possible.

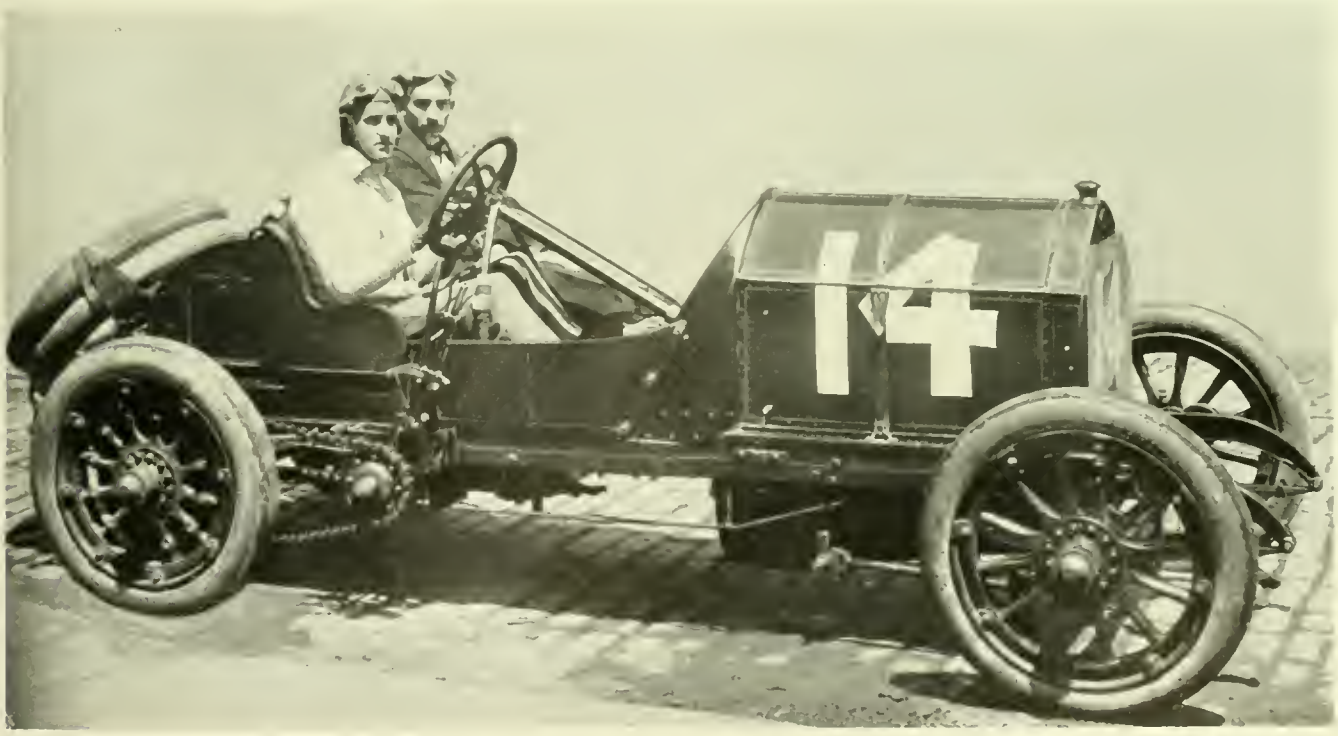
The motorcycle events were run off first, and B. A. Swenson on a big Indian made a new record for the hill of 1.03.

The Babcock, a new and unusual type of electric automobile, made a smooth and noiseless ascent in 3.00 9-10, a remarkably good record for a machine built for a speed of not over 18 miles per hour on such a course. The cars of stock models and those driven by Worcester County amateurs furnished fun and interest for the spectators, some of them showing great speed and all making a good showing. The two most notable, perhaps, were the records made by the Stanley steamer owned and driven by Jay Clark, Jr., a Worcester attorney and the former record holder, which established a new amateur record of 1.09 9-10, and the fine showing made by Nelson Slater, who negotiated the hill in 1.33 3-10.

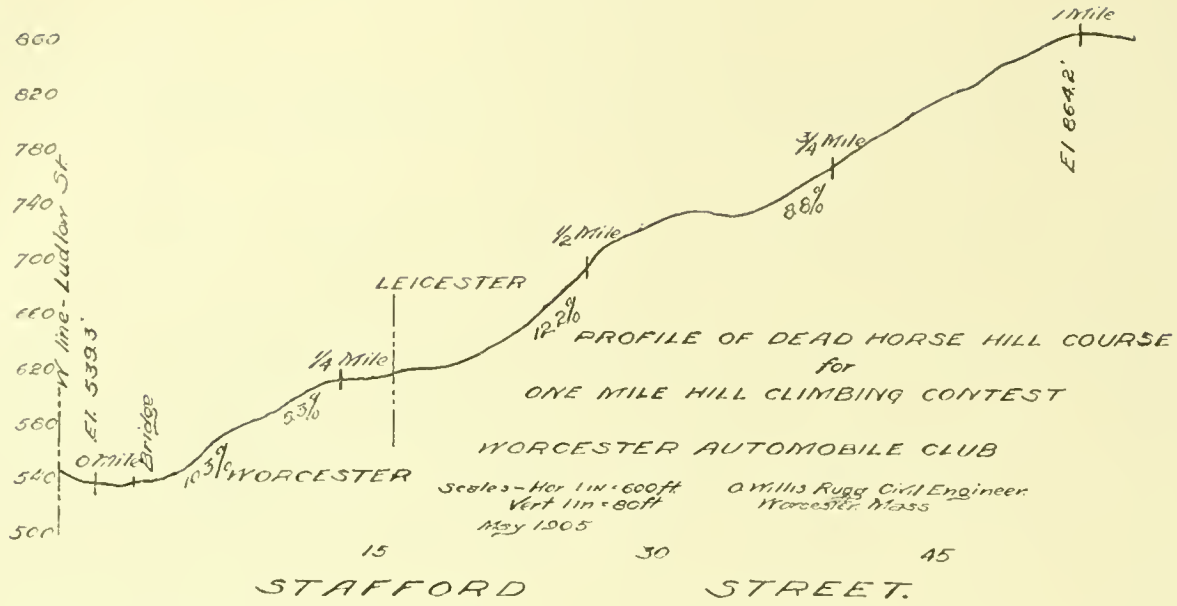
Interesting records were those made by the Stearns driven by R. H. Higgins with four passengers, in 1.53, and the Atlas, also with a load, with Elmer Knox driving, in 1.31 2-10.

The attempts by the Fiat, Alco and Stanley machines to break the record for the hill did not succeed, as the famous Stanley driven by Marriott, which made the record of 54 seconds last year, could not do better than 1.09 9-10 this year. A splendid effort by Grant in the Alco resulted in a mark of 1.01 1-5, and Bragg in the Fiat made the best trip of the day in 58 seconds, as before stated.

An occurrence which spoiled the time of the record events was the effort of a Leicester policeman at the top of the hill to occupy the middle of the road until the last possible moment. Both Bragg and Grant said afterwards that the time would have been at least two seconds faster if they had not been obliged to slow down and



Caleb Bragg and his Fiat, in which he climbed Dead Horse Hill in 58 Seconds



swerve because of this man's slowness. A Worcester patrolman was sent to warn him off the road.

When Grant made his last dash up the hill, the roadway at the bottom of the course was filled with spectators making for the gate, and the wild scramble to get under the fence was ludicrous. Evidently many thought the races were over and had no thought of danger. At all other times the course was well policed.

Harry Grant in the Alco Going up the Hill

The chronograph timing was a feature of the contest and was installed by Professor David L. Gallup of Worcester Polytechnic Institute, assisted by I. C. Harvey and C. D. Knight, also of the Institute. A wire at the start and a wire stretched across the road at the finish with a gong at the latter point, which was set in motion by a broken contact when the flying vehicles crossed it, registered the time to within 1-100 of a second.

The success of these races, as in past years, has been due, in a large measure, to the efforts of Mr. John P. Coghlin, for five years President of the Worcester Automobile Club, and this fact was signalized this year by the members of the club, who presented Mr. Coghlin with a gold watch fob, properly inscribed, a recognition of his services that will be applauded generally.

The Crowd Leaving the Hill

Editorial Reflections

City Congestion and Trolley Transportation

THE Worcester Magazine in its current issue has devoted a material amount of space to the great subject of city planning, a theme that is now engaging, and properly so, the wisest brains in this country. The tremendous phenomenon of the twentieth century is the drift toward the cities. Not alone in this country but abroad—in England for example—there is a genuine exodus from the land. So pronounced has this tendency become that economists are becoming alarmed, both over what this movement portends in decreased production of food-stuffs, and equally so over the problems of congested population that follow in logical sequence. Much attention has been given and will be given in this Magazine to the "back to the land" campaign now in progress all over the country, and which will be given a tremendous boost in New England by the Corn Exposition in this city this fall, but this number of the Magazine accentuates the other end of the proposition—the city problem.

Secretary Watrous of the American Civic Association—himself no mean authority on the subject of city planning—has prepared for us a thoughtful résumé of what went on at Rochester last month, but he has wisely, we think, laid the emphasis on two papers, one of them delivered by Frederick Law Olmstead, the celebrated landscape artist, and the other by George R. Wadsworth, an equally distinguished civil engineer.

Mr. Olmstead points out that cities should no longer be allowed to grow in the haphazard way that has heretofore characterized them, but every bit of development, particularly in the outlying sections, should be carefully planned out in advance and laid out, so that when completed the city will be one coherent whole. The German cities are now all built that way. With our modern realty companies buying farm lands near our cities and cutting them up into house-lots, this matter of laying out streets and squares and planning for future sewer and water and gas and electric light users is a matter of momentous importance and one to which we have given too little attention. The development of real estate about all our great cities ought to be encouraged, but it ought to be encouraged with an eye single to the future and never for the temporary advantage and prosperity of either the owner or the broker.

Mr. Wadsworth's paper is a profound disquisition on the whole subject of transportation, and we have ventured to put his recommendations with reference to the carrying agencies in heavy type, so that he who runs may read.

Mr. Wadsworth very wisely and properly points out in his paper that in the development of our great transportation agencies they all have rights as well as advantages that must be considered. He pleads, it will be seen, for an examination by experts of the whole territory sought to be served by carrying agencies, and he declares that the present steam railroad properties, the so-called rapid transit lines and the surface car lines must all be considered as a whole—the entire problem of the part each shall play in carrying passengers and freight must be attacked in one broad comprehensive plan, not from the standpoint of the steam railroad or the street railroad alone. He considers the railroads to be, as they are, the backbone of the carrying trade. The vertebræ must be articulated and employed so that they will strengthen and not weaken the physical development of the whole structure.

Both papers are commended to the thoughtful attention of publicists everywhere.

In addition to these two articles of a somewhat foreign flavor, we have considered other phases of the city's life from a more local standpoint. The paper on the Worcester Y. M. C. A., for example, tells in a succinct, readable way the simple story of a powerful factor for good in the life of this city. So, too, the illustrated article on the Dead Horse Hill Climb reveals our people in still another aspect—at play.

The historian of the future will find the American city of the early twentieth century a gold mine of material. We ourselves are conscious of its progress, its problems, its piety and its play. Like the old Roman we can declare, "All of which I saw and a part of which I was," but as to its possibilities and its potentiality, not even the wisest among us can prophesy. We simply know that we have here a great problem and that in its solution all of the patriotism, all of the patience and all of the practical common sense of which we are possessed will be called into play.

The Worcester Magazine seeks to be helpful not only to the citizens of Worcester, but to the citizens of the world, and if what it publishes along this line from month to month sheds the smallest ray of light on this great problem, it will be content.

Are Freight and Express Rates too High

Like the poor, in one way if not in another, express and freight rates we always have with us. Every commercial organization in this country worthy of the name is studying this problem and trying to ascertain the effect upon local business of the multitudinous changes that are daily and almost hourly being made in the schedules of the great transportation agencies.

Since the Worcester Magazine last went to press a complete new commodity tariff has gone into effect on the railroads on both eastern and western shipments. It does not yet appear that the new tariff materially affects Worcester as far as western shipments are concerned. Our greatest commodities are unharmed, it is claimed, and several of the most important schedules remain unchanged. Whether the eastbound schedules will be equally favorable was, the first of this month, unknown. The multitudinous roads, fully seventy-five in number, filing schedules in Chicago on commodities bound east and destined for Worcester, had not up to that time shown their hand. We shall learn this month of course where we are at. It is not anticipated at this writing that the changes will be either numerous or burdensome, but until hope becomes merged in certainty, shippers will lie down in dread and get up in fear. Certain it is that the manufacturers of New England are in no condition to increase their overhead charges a penny, if they are to continue to make money. And it is probable that what they can properly do through

their several boards of trade and chambers of commerce to keep the rates down, they will do.

An investigation of the rates charged by the four great express companies has now been undertaken by the live commercial organizations of the United States, and it is believed that they have a good case against these monopolies, particularly with reference to their terminal charges.

It has been shown that a package weighing 100 pounds is transported from the depot in Yonkers, N. Y., to the customer for 26 cents and a fraction, and the same package transported from the depot in San Francisco to the customer in that city, pays $7.58 and a fraction for identical service. No objection is made by the shipper to paying the railroad a greater price for transporting a 100-pound package from New York to San Francisco than he pays for transporting it from New York to Yonkers. What is objected to is paying $7.58 in San Francisco for precisely the same operation that is performed in Yonkers, N. Y., for 26 cents.

If the allegations as set forth above are established before the Interstate Commerce Commission, it is fair to assume that there will be a material reduction ordered in express rates soon.

The American Express Company is capitalized at $18,000,000. Its net income last year was $3,276,352.01, or not quite 18¼ per cent. The United States is capitalized at $10,000,000, and its net income was $893,035.41, or not quite 9 per cent. The capitalization of the Wells Fargo is $8,000,000, and its net income last year was $4,664,379.54, or a trifle over 50 per cent. If the railroads of the country were making similar satisfactory showings to their owners, it is fair to assume that they would reduce their rates or be made to do so.

Watch Germany

The thoughtful student of foreign affairs in every land will find profitable employment during the next few months, and possibly for an even longer period, in "watching Germany." No nation in Europe has made the giant strides that Germany has made in the little less than forty years that have elapsed since the close of the Franco-Prussian War. And yet during all this time she has had to see the first place in European affairs filled by her political and industrial rival, Great Britain. Under the wise and beneficent rule of Queen Victoria and her conservative and diplomatic son, King Edward, the entente cordiale between the two countries has been maintained, although at times it has seemed as if the radicals in one nation would precipitate armed hostilities with the people of the other.

Emperor William is believed to be a man of peace, but he is known to be a past master of statecraft and a monarch capable of masking his real plans behind the most amicable protestations. Those who know him best declare that whether he speaks impulsively or designedly, he never forgets the Fatherland and its future as well as its present eminence. He has undoubtedly been overshadowed as a ruler if not absolutely held in check by his shrewd and powerful "Uncle Edward."

Now that the force of the Peace Maker's presence and influence is gone, will the Kaiser's voice still be for peace or will it be for war? That is the question. He is undoubtedly the greatest European sovereign now living. He is at the head of the greatest fighting machine in existence—the Prussian army. He is also the greatest captain of industry that the globe boasts. Which will weigh heaviest in the balances of his ambition—to make his nation the greatest peace-promoting agency in the world or a besom of wrath sweeping the nations as the farmer sweeps the threshing floor? It is unquestionably in his power to tip the scales either way. He is Edward VII's legitimate successor as the earthly king of kings and lord of lords. Will he use his great power to kill or to make alive?

Does he desire to increase the output of that little factory controlled by the Krupp girls, or is he more concerned about building porcelain stoves and developing the recently organized German match trust? What is in his mind to do he will undoubtedly do. For that reason every eye in Europe, whether that eye be in the peasant's hut or the statesman's cabinet, can be profitably employed for a long time to come—in fact so long as his life shall last—in watching "Hoch der Kaiser" and the nation he so brilliantly represents.

The Census and the Telephone

When, every ten years, Uncle Sam starts in to find out just how large his family has become since he last took account of stock, he finds the path filled with snares, gins and pitfalls. Unlike Germany, where every man, woman and child is tagged early and often in order that they may either be taxed, arrested or thrust into the army, the United States pays very little attention to the people within its borders save on these decennial roundups. Then in his conscientious way Brother Jonathan tries to make a rather thorough job of it. Tabulating machines are built and human machines are hired, and a vast mass of statistics compiled.

The one thing about the census of paramount interest to every American citizen, however, is always the population of the place where he resides. In order to establish this beyond peradventure we suffer much.

This year has been no exception to the general rule. The inquisition into the private affairs of every concern and industry has gone bravely on. We have related our history and our grandfathers' as far as we knew it, and now we await the verdict of the enumerators with as much patience as we can command.

Will the tabulation show Worcester a city of 143,000 souls, or will the count fall below or rise above that figure? Deponent saith not; but one thing is certain: no stone has been left unturned to count our people and to count them right.

Fearing that some might be skipped and believing that a side-light at least on the efficiency of the canvass might be thus secured, the Secretary of this Board, after consultation with Manager Charles J. Abbott of the Worcester exchange of the New England Telephone & Telegraph Company, communicated with President J. N. Keller at Boston, asking him to instruct his operators in this city to call their 13,000 subscribers and inquire if they had been enumerated.

These 13,000 odd subscribers represent more than 50,000 people, and be it said to the high honor of this company that the request was complied with promptly.

That we were able to bring about this innovation here and thus satisfy ourselves that a conscientious attempt had been made to ascertain the population of Worcester, is a matter for gratulation. The thanks of this Board and of this city are due and are hereby extended to President Keller for his courtesy and cooperation in this matter, and in these thanks we desire to include the office force of the Worcester exchange from the manager to the humblest operator.

Local May Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

No material improvement has developed in general trade conditions locally. Quiet conditions prevail in many lines, although bank clearings continue to show substantial gains. For last month they amounted to $10,202,582, compared with the corresponding month of last year, when they showed a total of $6,997,239, showing a gain of 45.8, a gain of 41.6 over the same month of 1906, when they totalled $7,203,446.

Failures for the month totalled nine (9) with liabilities of $52,226 and assets of $16,746. The corresponding month of 1909 showed twelve (12) with liabilities of $58,904 and assets of $26,892, 1908 three (3) with liabilities of $5,608 and assets of $2,415, 1907 six (6) with liabilities of $32,454 and assets of $10,370, 1906 eleven (11) with liabilities of $35,567 and assets of $13,906.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

A. H. Stockwell, Firearm, No. 954,657.

A safety mechanism for firearms, consisting of a striking nose movably mounted upon the hammer, and normally maintained in such a position that it cannot strike the cartridge, and adapted to be lifted into the striking position by the pulling of the trigger.

Alonzo W. Whitcomb, Power Transmitting Device, No. 954,661.

A friction clutch having a driving and a driven element, friction members carried by each of these elements, and a lever adapted to operate one of these members to secure the elements together, the lever being so constructed as to balance masses and overcome the influence of centrifugal force.

George N. Jeppson, Bonded Article and Method of Making Same, No. 954,809.

A method of bonding which consists in melting an aluminous material containing reducible oxide in an electric furnace under reducing conditions, crushing the product, and forming the particles into an article bonded by the re-oxidized impurities.

Martin Burrmeister, Egg Separator, No. 956,678.

An automatic device adapted to separate the yolk from the white of an egg, and also to separate the fresh from the stale eggs. The separated parts are conveyed into different receptacles.

Walter S. Doane, Inhaler, No. 957,548.

An inhaler comprising a tubular container having a mouth-piece, a chamber inside the container adapted to receive an absorbent medicated material spaced from the inner wall of the container, a partition fitting frictionally in the container against which the end of the chamber is held, and having passages therethrough communicating with the interior of the chamber, and passages beyond the circumference of the chamber whereby a path for the air outside the chamber is provided.

Worcester Quotations

Furnished by Thompson, Towle & Co., 311 Main Street

May 20, 1910.

BANKS.

	Bid.	Asked.
Mechanics National Bank	150	
Merchants National Bank	170	
Worcester National Bank	210	
Worcester Trust Company	325	

RAILROAD STOCKS.

Boston & Albany	224	last sale
Boston & Maine common	136	last sale
Boston & Worcester Elec. common		10½
Boston & Worcester Elec. pfd	40½	42
Fitchburg preferred	128	last sale
New England Inv. & Sec. pfd	90	92
New York, New Haven & Hartford	151	last sale
Norwich & Worcester	211	last sale
Providence & Worcester	263	last sale
Worcester, Nashua & Rochester	141½	last sale
Worcester Railways & Investment	75	80

INDUSTRIAL STOCKS.

Crompton & Knowles pfd	147½	
Denholm & McKay common	200	
Denholm & McKay pfd	100	103
Graton & Knight Mfg. common	135	140
Graton & Knight Mfg. pfd	115	118
Royal Worcester Corset Company	140	
United States Envelope common	53	55
United States Envelope pfd	114	115
Worcester Gas Light	270	
Worcester Electric Light	270	290
Wright Wire Company common	102	
Wright Wire Company pfd	110	115

BONDS.

Amer. Writing Paper 1st 5's	88½	last sale
Boston & Worc. St. Ry. 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5¼	basis
Marlboro & Westboro St. Ry. 1st 5's		95
Noreross Brothers 1st 6's	98	100
United States Envelope 1st 5's	101	102½
Worcester Cons. St. Ry. 1st 4½'s	94½	
Worcester & Marlboro St. Ry. 1st 5's		98
Worcester & Southbridge St. Ry. 1st 4½'s	85	90

Current Currents

General

April 29. Worcester United Commercial Travelers' Association holds annual minstrel show under the direction of Alfred Van Dusen.

May 2. Worcester Electric Light Company gives notice that after July 1st it will rebate one dollar per month minimum charge to users of $12 actual current.

3. Report of Worcester port of entry shows receipts of 4410 packages valued at $17,544, and netting $6,882 in duties.

Young Women's Christian Association holds annual May breakfast, attended by 800 persons.

6. Worcester Consolidated Street Railway Company opens trolley line to entrance of Lake Park.

10. Fire originating in work room of Bernard Schultz & Company, shirtwaist makers, does damage to the extent of $1,500.

Thomas Street Swedish Methodist Church burns mortgages amounting to $7,800.

11. Business men of Worcester at luncheon take steps toward forming a publicity association.

Rev. John H. Matthews, Worcester city missionary, elected General Secretary and Superintendent of the Pittsburg Newsboys' Home Association.

16. Maynard Land Company of Providence buys sixty-five acres of land of Mrs. Mary C. Flagg, to be developed into 650 house lots; sale price, $100,000.

17. John E. Mayhew takes over plant of the Buckley Car Company, for manufacture and handling of builders' finish.

Arrangements completed for an open air hippodrome at Boulevard Park to be operated by Bay State Amusement Company.

Independent Ice Company of Worcester awarded contract to supply ice for the N. Y., N. H. & H. and B. & A. Railroads.

19. Chas. W. Lynch of Worcester chosen Trustee for the Massachusetts Grand Court, F. of A.

Rev. Frederick B. Kellogg of Waterbury, Vt., called as pastor of Hope Congregational Church.

Fire of uncertain origin causes $50,000 loss at furniture store of Robt. Northridge Company.

20. At meeting of Directors of Worcester Playground Association, Dr. Henry S. Curtis of Washington, secretary of American Playground Association, launches campaign to raise $10,000 for playground movement in this city.

Industrial

May 2. Worcester Building Finish Company, 51 Hermon Street, reorganizes with a capital of $30,000.

3. Alsten & Goulding Company, dealers in automobile accessories, incorporated under Massachusetts laws with a capitalization of $75,000.

Fiske Carter Construction Company awarded contract to build two-story cotton mill for the E. L. Shuford Company, Lawton, Oklahoma, to cost $160,000.

J. W. Bishop Company awarded contract to build $100,000 residence for Robert Gould Shaw of Brookline.

Fiske-Carter Construction Company awarded contract to build a $30,000 residence for Frank C. Partridge, Proctor, Vt.

4. E. P. Worth Shoe Company of Worcester incorporated under Massachusetts laws and capitalized at $50,000.

7. Norcross Brothers Company awarded contract to build foundation for custom house tower at Boston for $278,000.

Worcester Muslin Underwear Company to make an addition 50 x 60 feet long, four stories high.

10. E. J. Cross awarded contract to build concrete storehouse for Worcester Woolen Company, 40 x 100 feet.

14. Oxidase Laboratories of Worcester incorporated under Massachusetts charter, with capital of $50,000, to put up medicinal supplies.

18. Fred W. Wellington Coal Company sold to the W. G. Morton Company of Albany, N. Y., for $32,000.

City Hall

May 3. Superintendent of Public Buildings George C. Halcott awards contract for addition to Ledge Street School to John J. Powers, to cost $36,900. Central Supply Company to install the heating plant at a cost of $6,000.

24. Mayor James Logan sails for a three-weeks' tour of England.

Necrology

May 5. Oran Allen Kelley, 500 Lincoln Street, aged 67 years 8 months and 3 days, of heart disease.

16. John M. Russell, 19 June Street, at Pittsburg, of pneumonia, aged 52 years 8 months and 14 days.

17. General Augustus Brown Reed Sprague, 30 Chestnut Street, of pneumonia, aged 83 years 2 months and 10 days.

19. Alvin Solomon Moulton, 18 Tirrell Street, of paralytic shock, aged 80 years 9 months and 27 days.

John May Russell

Ex-President of Public Library Trustees and a Member of this Board, Dies Suddenly at Pittsburg, Pa.

The death of John May Russell at Fort Pitt Hotel, Pittsburg, Pa., May 15th, after a three-days' illness caused by pneumonia, took from this life one who had played a conscientious part in the development of one of our great industries. Born in Oakdale, Mr. Russell was educated at the Worcester Polytechnic Institute, graduating in 1876. From that day his interest in his Alma Mater had never flagged and he gave much of his time to the Alumni Association of the school, at one time serving as its President.

After graduation Mr. Russell entered the employ of the Knowles Loom Works as accountant, afterward becoming chief bookkeeper and cashier. When the

JOHN M. RUSSELL

Knowles Works were merged into the Crompton & Knowles Loom Works, he was made the first treasurer, serving in that capacity until six years ago, when his health compelled him to relinquish the position.

Two years ago, having regained some measure of strength, he took up the work of traveling auditor for various investment companies, and in this capacity traveled over much of the United States. He was serving in this capacity when his final illness occurred.

Mr. Russell used his large experience as an accountant while serving as a trustee (1902-1907) of the Public Library, the last portion of his term as President of the Board of Trustees. His most notable work in this connection was the tabulation of the endowment funds of the Library and their investment.

When he first came to Worcester, he took an active part in the affairs of the Trinity Methodist Church, but when the Pilgrim Congregational Society was formed he transferred his activities to that society, and held several offices in church and Sunday school.

He leaves a widow, Martha (Roberts) Russell; two daughters, Madeline and Genevieve; his parents, Mr. and Mrs. Samuel S. Russell, of 4 Mayfield Street, and a brother, Charles W. Russell, of 6 Mayfield Street. The family residence is at 19 June Street. Mr. Russell was a member of this Board, and was highly esteemed by those who knew him best.

Producing Business by Automobile

A good test of the automobile as a business producer will be made by the Troy, Ohio, Business Men's Association. An automobile line will be established from Troy to Pleasant Hill, the present schedule calling for four trips each way daily. Passengers, light freight and express will be carried, and every item that will contribute to convenience and rapid transit is to be provided. This line is expected to open up a territory to which Troy has not had access, and incidentally it is expected to divert this traffic from the competing city of Piqua.

WORCESTER BOARD OF TRADE

11 FOSTER STREET
WORCESTER MASSACHUSETTS

EACH FOR ALL ALL FOR EACH
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD

Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, F. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN
CHARLES T. TATMAN, *ex officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman*
HERBERT L. ADAMS, DONALD B. LEGAN,
CHARLES H. BOSWORTH, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Building Laws, EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection. JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures, CLINTON S. MARSHALL.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs, CHARLES L. GATES.
New Enterprises, FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information. MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

Year Starts with a Boom

Splendid Response to Annual Assessment, and to the Call for Committee Work. Routine Business for May

The month of May was the first full fiscal month of the present administration and was marked by many pleasing incidents in connection with the work of this Board. One of the most gratifying occurrences was the response made by the members to the notification that their dues were payable for another twelvemonth. There is no more accurate barometer of the interest taken in a commercial organization by its members than the promptitude with which they pay their dues. During the thirty days ending with June 1, more than 325 members had paid their annual assessment, the largest number ever responding in the same length of time.

Another indication of the interest in the work of such a body is the response the members make to committee assignments. To serve on a committee of this Board is as a rule no sinecure. The subjects referred are frequently very important.

A man may be called upon to give largely of his time to a matter in which he has but slight personal interest, and yet in order that no injustice may be done any one and that the Board when it does act may act intelligently and for the best interest of all concerned, much time is spent, and in no infrequent instance real sacrifices are made of both time and money in order to get at all the facts. Still, in spite of all this, men are found public-spirited enough to serve on these committees, and never has the response to the invitation to serve in that capacity been more prompt and gracious than this year.

A new committee has been created by the Board—Agriculture—and Hon. J. Lewis Ellsworth, our honored Secretary of the State Board of Agriculture, has accepted an invitation to serve as its chairman. On the Committee with him have been placed members of the Board who are in hearty sympathy with the "back to the land" movement, now so prevalent everywhere, and they have one and all enthusiastically pledged themselves to do everything in their power to assist the organization in encouraging this fundamental industry. The fact that the New England Corn Show is to be held in this city this fall makes the appointment of this Committee particularly timely.

At the regular meeting of the Directors of the Board, May 12, the President, Mr. Charles T. Tatman, being detained at the dinner of the Worcester County Bar Association, the Vice-president, Mr. E. M. Woodward, presided. There were present besides Mr. Woodward of the Directors, Mr. William Woodward, Mr. Charles E. Hildreth, Mr. Arthur C. Comins, Mr. Albert H. Inman, Hon. Daniel E. Denny, Mr. S. Foster H. Goodwin, Mr. Franklin B. Durfee, Mr. Louis H. Buckley.

The list of committees for the ensuing year was read and approved, as were also the Secretary's estimates of the income and expenditures of this organization for the next twelve months, which were ordered incorporated in the minutes. The list of these committees, the list of Directors from 1891 to 1910, the list of members at the present time, the census of 1910 for Worcester, if promulgated in time, and other facts of interest to the members, will be incorporated in the annual year book of the organization, now being made up in the Secretary's office.

A communication was read from Edwin H. Marble petitioning for an investigation of "the Housing Question," so called, the subject of "Industrial Betterment," and the possibility of securing a saner and less sensational press. Mr. Marble stated that he would be glad to co-operate in an investigation of any of these subjects and would endeavor to get speakers here to address the Board on the first of these two topics. The letter was referred to the Committee on Meetings and Receptions for investigation and recommendation.

An invitation was received from the Illinois Manufacturers' Association to send a delegate to a conference to be held under its auspices to discuss the proposed advance in freight rates and to protest against the same. The matter was referred to the President, with power.

A communication was read from the Wright Wire Company protesting against the abolishing of the passenger station at South Worcester, setting forth the number of people convenienced by this station as revealed by an enumeration they had caused to be made, and petitioning this Board to use its good offices to have a new station erected to take the place of the one abolished.

This matter was referred to the Committee on Transportation for further investigation and report.

A petition from the Boston Chamber of Commerce, accompanied by a resolution inviting the International Congress of Chambers of Commerce and Industrial Associations to hold the International Congress of 1912 in Boston, was read, and the resolution adopted.

On motion of Mr. Buckley the matter of appointing a delegate to this Congress was left with the Executive Committee, with power.

It was voted to appropriate $5 for a prize for the summer gardens in connection with the public schools, as asked for by Edna R. Thayer.

The following were elected members of the Executive Committee for the current year: Mr. E. M. Woodward, Mr. Louis H. Buckley, Mr. Albert H. Inman, Hon. Daniel E. Denny, and the President, ex-officio.

Railroad and Express Rates

Worcester Board of Trade Exerting Itself to Protect the Interests of the Shippers of this Section

Two subjects of vital interest to the members of this Board and to eastern shippers as a whole have been forwarded to the best of our ability, during the month just closed. One dealt with the railroad problem and the other with express rates.

One of the vital things in the railroad bills now under discussion in Congress is the long and short haul clause, so called. The long and short haul clause, as contained in the present Interstate Commerce Act, is thoroughly understood by the shippers of this section, has been adjudicated by the Interstate Commerce Commission and the Supreme Court, and our distributive business has adapted itself thereunder. For this reason, this Board considers it extremely harmful to the business interests of this section to have this clause, as now interpreted, disturbed. Any material change in this section cannot but materially affect the New England shippers. With this end in view the Executive Committee caused to be forwarded to Washington a protest on the part of this body against any change whatever being incorporated in the bill now under consideration by the Congress. The bill which is now in conference will, it is believed, preserve in its essence, if it does not in exact verbiage, the principle of the long and short haul as now embodied in the present Interstate Commerce Act. If this is accomplished the greatest protection the New England shipper now enjoys will be retained. It is in work of this character that the Worcester Board of Trade emphasizes its value to this community, as in the clash of contending interests in this country it is now impossible for an individual shipper acting on his own initiative to be able to protect himself, and he must invoke the services of commercial organizations of this type.

In this particular instance the Worcester Board of Trade united with the stronger eastern commercial organizations, of which this body is a member, in its efforts to retain the existing long and short haul clause.

Another matter of equal importance was a meeting held in New York, May 17, attended by the President of this Board, Mr. Charles T. Tatman, a delegate from this body to the Traffic Committee of the eastern commercial organizations. Three matters of great consequence were considered:

First, the proposed advance in freight rates between seaboard territory and the West.

Second, long and short haul clause in legislation amending the Interstate Commerce law, and—

Third, conference with presidents of Northwestern railroads concerning policy connected with the Spokane rate case.

The proposed advance in class and commodity freight rates was discussed in detail. The consensus of opinion was that while an increase in rate at this time may be justifiable, there is no warrant for the proposed indiscriminate percentage increase which would inflict a heavy burden on eastern shippers. It was finally resolved that a committee of four, of which the Chair shall be one, shall be appointed to draft a protest to the railroads against the proposed indiscriminate percentage increase in freight rates, the protest to include a request for a conference between the Executive Traffic Committee of the eastern commercial organizations and the executive traffic officials of the trunk line and New England railroads. Following the adoption of the above resolution this Executive Traffic Committee was designated as follows: D. O. Ives, Boston, chairman; Charles T. Tatman, Worcester; George H. Scranton, New Haven; Charles A. Schieren, New York; Albert Plaut, New York; N. B. Kelly, Philadelphia; A. J. Kealhofer, Baltimore; E. S. Goodwin, Richmond; S. C. Mead, New York.

This Committee has a conference in New York with the railroad officials, June 10, for the purpose of considering this matter.

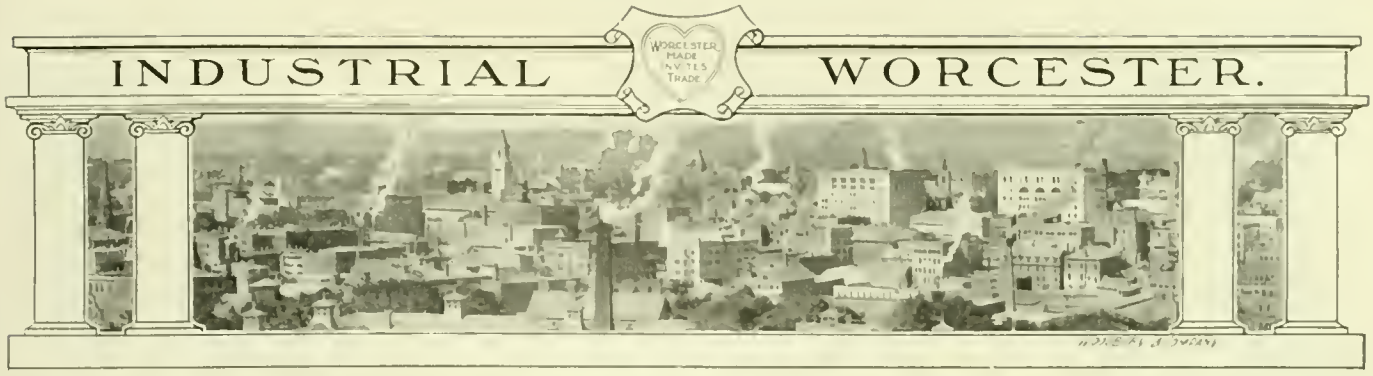
Mr. Ives reported that a conference had been had in Chicago at the suggestion of Judge Lovett, president of the Union and Southern Pacific systems, with J. C. Stubbs, traffic director, concerning the issues involved in the Spokane and allied rate cases, as affecting the East. Mr. Stubbs fully appreciates and is in sympathy with the position of the Atlantic seaboard in this matter. He does not favor the proposition of graded rates submitted by the northwestern railroads, which has met with the protest of this Board. With reference to the conference of representatives of the eastern commercial organizations with the presidents of the northwestern railroads, heretofore requested, Mr. Stubbs suggests that a communication be addressed to these officers accepting their decision that nothing can be gained by a meeting prior to the decision of the Interstate Commerce Commission in the Spokane rate case, but asking them to agree to meet the representatives immediately after the decision, assuming that the decision will probably be such as to give latitude to the railroads in complying therewith.

In accordance with this suggestion it was voted to draft a letter, in which it shall be set forth that the Committee desires to have this conference as soon as possible after the announcement of the Commission's decision and before any action is taken in connection therewith, assuming that the decision will be of such a nature that considerable discretion may be used in complying with the general terms.

With reference to the matter of express rates Mr. A. S. Lowell of this city attended as a delegate from this Board a conference of representatives of commercial organizations of this country at the rooms of the Merchants' Association of New York, Wednesday, May 11.

The entire subject of express rates was gone into very thoroughly, and the consensus of opinion was that express rates apparently are higher than are warranted by fair return on the amount of capital properly invested in the express business and that in many ways the practices and regulations of the express companies are unjustified.

It was the general opinion that the specific information necessary to determine conclusively the reasonableness or unreasonableness of rates and practices could be fully developed only by an investigation by the Interstate Commerce Commission of this whole subject, and the delegates in attendance passed resolutions to that effect and pledged the organizations represented to act as petitioners for this inquiry.



The New England Telephone Index

To the long list of successful Worcester inventors should now be added the name of Mr. H. O. Hibbard, for twelve years in charge of the telephone department of the Worcester Market. His long experience in this connection led him to seek a more convenient and quicker method of finding telephone numbers, and a short time ago he perfected a device which he claims is superior to any telephone index now in use.

A brief description of this new index follows: A receptacle three inches wide and fourteen inches high, made of pressed metal, is mounted on a base supported on rubber tipped feet. In this receptacle cards of varying length and of different colors are inserted. The longer cards, at the back, are residence numbers; next come business or professional calls, then blank cards to contain a list of numbers frequently called and, at the front, cards for emergency calls, such as police, fire, ambulance, family physician and nearest doctor. The cards are indexed under the first two letters of the name.

In operation, the front is equipped with a metal leaf, which, when pulled down, forms a support for a loose leaf pad for memoranda. Pencils are contained in small holders attached to each side of the index. By placing the fingers upon the correct exposed index card and pulling forward, the card bearing the desired number is shown. After use, press upward on the pad plate, when the cards instantly return to their former position.

The cards are to be corrected by the makers upon the issuing of each new number of the telephone company's official book of subscribers. The index is to be leased for one year and contracts are now being secured in this city.

The officers of the company are: President, F. A. Amidon, proprietor of the Worcester Market; Treasurer, F. A. Lowe, manager of the Worcester branch of the Armour Packing Company; General Manager, H. O. Hibbard, and Clerk, Clarence E. Tupper. The capital of the company is fixed at $25,000, and an office has been opened at 1013 Slater Building. The indexes will be made for the company in this city.

The N. E. Telephone Index

The Madsen Automatic Water Heater

The Madsen Automatic Water Heater, for use in all places where it is desired to heat water by live or exhaust steam, consists of a brass pipe holding water within an iron pipe through which live steam flows. An ingeniously arranged valve insures the delivery of the water at a predetermined temperature, the claim of the manufacturers being that once set this valve need never be touched, and that the water will always be delivered at the same temperature. This valve is actuated by the expansion and contraction of the inner brass tube, which expands and contracts as the water within becomes too hot or too cold.

Many claims are made to show the advantages of this heater: Even temperature, the elimination of cost of storage tanks, the fact that thermostats, diaphragm and pilot valves, devices which have been proven unreliable, are done away with; the assured purity of the water, as no contamination can be caused by impurities, either from the steam or from metal tanks coming into contact with the water within the brass tube; no waste of steam, as the valve shuts off when the water gets to the right temperature; the saving of space in comparison with hot water tanks or coil heaters, and its adaptability for use in any position on floor, wall or ceiling will appeal to those who have only an odd space available.

Other advantages claimed for this heater are these: Easy increase of capacity, as the heater is built in sections, and a section may be added at any time; no parts burning out; no delicate thermostat to get out of order; the manner in which automatic valve looks after the temperature so that the fireman does not have to exercise constant watchfulness; the adaptability of the heater for any steam pressure or any water demand; the fact that there is practically no cost to operate with exhaust steam and, if live steam is used, no heat is wasted, for the hot drip can be returned directly to the boiler.

Mr. George C. Madsen of this city, formerly engineer at the Worcester Home Farm, is the inventor, and has begun supervising the installation of the new heaters for the Colwell Lead Company, who are placing it upon the market. The Madsen heaters are being made in Worcester, and add one more to the long list of practical specialties which characterize the output of this community.

The Jones Supply Company

The Jones Supply Company, 5 Green Lane, was started in 1903, and is engaged in a variety of enterprises. The concern has recently installed a Writerpress, and is prepared to do manifold form or circular letter work in any quantity at short notice. It also does an increasing business as publishers and jobbers of picture post cards, and purveyors of music and automobile books. The field for the Writerpress in a city the size of Worcester, with its demand for form letters, is very great and the company expects to do a large business in this connection.

PROPOSED ENTRANCE TO PARKWAY AT LENOX

A Million Dollar Development in Worcester Realty

To be known as "a city of homes" is an invaluable asset to any city. The more prevalent the home-owning spirit, the less "floating" becomes the character of the population. The custom of renting breeds the changing habit that characterizes the life of the gypsy, while home ownership shows a substantial condition that indicates not wealth alone, but that spirit of thrift and enterprise which is of inestimable value in the civic life of any community.

The careful student of a city's growth appreciates the fact that one of the most—if, indeed, not the most—important factor in a municipality's material prosperity is the character of its real estate activities. The business blocks, the homes, the condition of its public and private grounds are the silent but salient expressions of a city's progressive spirit and civic pride, or of its indifference to modern development.

To let the world know that Worcester is an ideal residential city as well as an ideal industrial city, to give point to the opening paragraphs of this article and to show the attitude of the community toward the facts so stated, it is only necessary to call attention to one of the most important developments of Worcester residential real estate in recent years.

This is the sixty-five acre tract of land, formerly widely known as the Chamberlain and Hammond estates, situated on Pleasant Street, opposite Richmond Heights, which is being developed by the O'Connell Real Estate Company, and which they have christened "Lenox."

Judge Frederick H. Chamberlain and Mr. Fred H. Hammond signed the transfers of this property to its present owners some months since, and it was, when recorded, the largest and most important transaction recently made in Worcester realty. Thirty acres of this plot have been in the Chamberlain family for over two hundred years, the first occupant being Andrew McFarland, a great great grandfather of Judge Chamberlain. The old homestead is still reserved by Judge Chamberlain and is undergoing extensive repairs and improvements.

Thirty-five acres belonged to the Hammond estate. The barn on this part of the property was considered wonderful in "ye olden time." It was the scene of a big barn raising, and the dances and social pleasures which lasted for a week when it was erected would have furnished inspiration for a "farm ballad" of the kind Will Carleton was wont to delight in.

Accompanying this article is an illustration showing the attractive entrance to Chamberlain parkway, designed by a Worcester architect, Mr. Charles H. Lincoln. In the centre of this parkway will be a shelter of cement construction with a "rough cast" exterior. The roof will be of cypress rafters, finished in antique stain, and the covering will be of red mission tile. With comfortable cement seats on each side and a background of trees and shrubs to complete the effectiveness of the artistic scheme, this gateway will be a revelation of the modern treatment of the approach to homes of refinement, being, as it is, the first of its kind in Worcester.

Mr. O. Willis Rugg, landscape architect and civil engineer, had an opportunity to exercise fine taste in the development plans of "Lenox." How well he has succeeded in his difficult task is shown by the bird's-eye view of "Lenox" portrayed on the cover of this issue.

Overlook road, seven hundred feet above sea level, affords an unsurpassed view of the Heart of the Commonwealth. Toward the city, one sees an inspiring vista, with Clark University, Holy Cross College and Worcester Academy especially prominent. Looming in the foreground is Bancroft tower with its castellated stone front, while dotting the panorama are stretches of living green marking the splendid parks, of which Worcester may well be proud, and the great industries whose fame has extended to every land—everywhere the evidences of a virile, artistic, purposeful civic life. To the north Mount Wachusett stands out in bold relief, and to the west wooded hills and green valleys combine with the blue of two of the city's lakes to make a scene of sylvan charm.

That the O'Connell Real Estate Company have appreciated their opportunity at "Lenox" is shown by the character and scope of the improvements included in their plans, which will necessitate the expenditure of over sixty thousand dollars. They will undertake to make the Chamberlain parkway one of the finest thoroughfares in Worcester. In the centre of this parkway, which will be eighty feet wide when completed, will be grass plots twenty feet in width, set with shade trees, shrubs and flowers. Then on each side comes a drive twenty feet in width with granolithic gutters, another grass plot five feet in width and then a granolithic walk, also five feet wide. All the other streets will be fifty feet wide, with grass plots between the granolithic walks and gutters. All these streets enter the parkway.

The contract for the granolithic work alone calls for an expenditure of over thirty thousand dollars, and was awarded to

DEVELOPING LENOX

the George W. Carr Company of this city. The specifications call for the very highest standard of granolithic construction. Other development work includes all the city conveniences, water, sewers, gas and electric lights. The lots are of large size and are sold under sufficient restriction to insure the best class of dwellings. There has already been active buying by local business and professional men, and many fine residences are to be begun at once.

The final achievement of this ambitious realty development means the addition of approximately a million dollars to the taxable property of the city, and adds to the city the most attractive residence section developed in many years.

The magnitude of the operations involved makes this undertaking the most ambitious task as well as the chiefest contribution the O'Connell Real Estate Company has yet made to the permanent development of the Heart of the Commonwealth.

The Alsten & Goulding Company

When the Worcester branch of the John P. Lovell Arms Company went out of business in February, 1900, John A. Alsten and H. C. Goulding bought its tools and repair materials and started a repair shop at 30 Waldo Street, using 450 feet of floor space. In 1901 the erection of the annex to the Barnard, Sumner & Putnam building compelled them to move to their present location at the corner of Foster and Waldo Streets, where they took half of the street floor and basement.

At this time they were doubtful of their need of so much space, but the next year saw them compelled to lease the whole of this floor and basement. In 1906 they took a lease of the entire building and made extensive improvements, including the installation of an elevator and the building of a side entrance for carriages and automobiles to facilitate the tire repair business, which had assumed large proportions.

At first the concern did nothing but repair work, but by degrees began to carry supplies and accessories for bicycles and automobiles. About six years ago they began wholesaling, and today have a force of salesmen on the road, and issue a yearly catalogue of 236 pages, which they believe to be the largest and most complete list of supplies and accessories published by any house in this country. The retail end of their business has kept pace with the wholesale end, and the volume of their yearly business in 1909 was nearly forty times that of 1900.

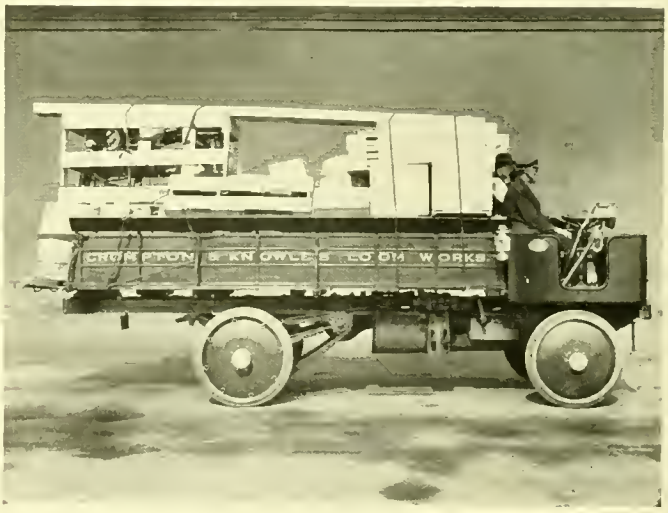
They claim to have the largest tire repairing and vulcanizing plant in central New England, equipped with the latest machines and operated by men of factory experience. They are prepared to apply any tire from the small solid tire for the baby carriage to the huge seven-inch tire for auto trucks and the largest pneumatic tire for automobiles.

They state that they carry the largest stock of tires in New England outside of the Boston branches of the tire manu

Norton Company

Asahel C. Joney

School Street Storage Co.



Crompton & Knowles Loom Works

Dr. Porter Operating Table

facturers their stock on hand amounting to a value of over $20,000. They carry a large and varied stock of motor supplies, wearing apparel, caps, leggings, goggles and all the latest accessories.

Finding that their capital was becoming too limited for the extensive business which they were developing, the partners decided to incorporate their business and take in additional capital and, on the first day of April of this year, the Alsten & Goulding Company was formed with a capitalization of $75,000. John A. Alsten was chosen president, and Horatio C. Goulding, treasurer, and they with Paul B. Morgan constitute the board of directors. They report that the business shows for each month, so far this year, an increase of 45 to 50 per cent. over the corresponding period of last year.

The Standard Manufacturing Company

In 1904 the Standard Manufacturing Company, 186 Union Street, of which Mr. P. E. Bassett is the sole owner, succeeded Southgate & Company, makers of shoe store supplies and factory tools. The special products of this company can now be found in the shoe stores and factories of this country and Europe. An improved shoe stretcher is one of its most widely used products, and lasts for shoe factories are another product for which there is an active demand. The manufacture of several patented forms of shoe trees is developing into another important branch of the business. A recent invention of Dr. Elias H. Porter, formerly surgeon in the United States Army, the Porter operating table, designed for use in hospitals and by surgeons generally, is made by this concern. The output of the company is distributed through wholesalers and a corps of salesmen is maintained to cover the country.

The Morgan Motor Truck

Five big power trucks in local use and a score more in Boston, New York and elsewhere, all delivered within the current year, is the unusual record of Worcester's young power truck industry, the R. L. Morgan Company. Particularly gratifying is it to note the eminent character of the majority of the concerns operating Morgan trucks, and indications point strongly to a pre-eminent position of the Morgan Company in the field of power vehicle manufacturers.

The first local concern to operate a Morgan truck was the F. E. Powers Company, coal merchants. Following close on the former, Joney & Company installed one of the big machines for hauling huge loads of empty barrels. The School Street Storage House and the Crompton & Knowles Loom Works also find the use of power trucks preferable to horses. The machine in use by the Norton Grinding Company is probably one of the most handsome trucks that has as yet been produced. This machine, before delivery, was exhibited at the Boston Automobile Show and excited a great deal of attention.

In New York city the Curtis Blaisdell Company, wholesale and retail coal dealers, employ a Morgan truck on their most severe routes, and to date it has given gratifying results. The Hastings Pavement Company, the Barrett Manufacturing Company, and the Mayer Brewing Company of New York city also are among satisfied users. It is interesting to note the Mayer Brewing Company have placed a repeat order, which fact certainly is a compliment to the local product.

The W. H. McElwain Company of Boston have recently placed an order for a five-ton truck with the Morgan people, and the F. E. Whitney Carriage Company of Leominster will also have one of these splendid machines in service shortly.

As we are going to press, negotiations are being closed by the Morgan Company with one of the largest and most influential concerns in Boston, and the indications are that this initial order will control many additional machines for use in that city and elsewhere in Massachusetts.

The success of the R. L. Morgan Company is assured, and if the firm continues to progress in no greater ratio than that accomplished since its organization in May, 1909, it is a certainty the other truck manufacturers will have to look sharp to their laurels.

Owing to the steady rise of the rubber market and increase in cost of tires, the Morgan truck on and after July 1st will be advanced in price from $3,750 to $4,000.

Walker Single-stroke Surface Grinder

The Walker Grinder Company of this city has recently designed and placed on the market a single-stroke surface grinder for grinding piston rings, thrust collars, small dies, milling saws and work of like character.

This machine, which embraces several new and novel features, is controlled by a single lever by which the work spindle is started and stopped, and the electric current of the magnetic chuck switched on and off at the same time, demagnetizing the chuck face, thus permitting the work to be removed easily and without scratching. The magnetic chuck is a new design known as the multitooth rotary type, and combined with it is a new system of chuck ventilation for use on wet grinders. A blower operated by a self-contained motor delivers a current of air from an opening through the centre of the chuck spindle, from there through the coil chamber and out through openings in the chuck rim. This method absorbs all the moisture and makes it impossible for any to reach the coil chamber. The cup-shaped grinding wheel, which is fed directly against the revolving work, has no cross feed, and the movement is limited by a positive stop. There is also a new carbon truer introduced in this machine, for squaring and truing the grinding wheel.

The grinding spindle, having ball-bearing thrust collars at each end of its lower bearing, carries the drum pulley, which is belted from the driving pulley on a vertical shaft. This spindle is mounted in a vertical slide, operated by a lever in the same manner as a sensitive drill press. When the lever is moved forward to its limit the slide comes in contact with a positive stop, thus insuring a uniform thickness for all work. Compensation for the wear of the wheel is provided for by an adjustment of the knee through a vertical feed screw, and the slide is counterbalanced by a weight inside the column.

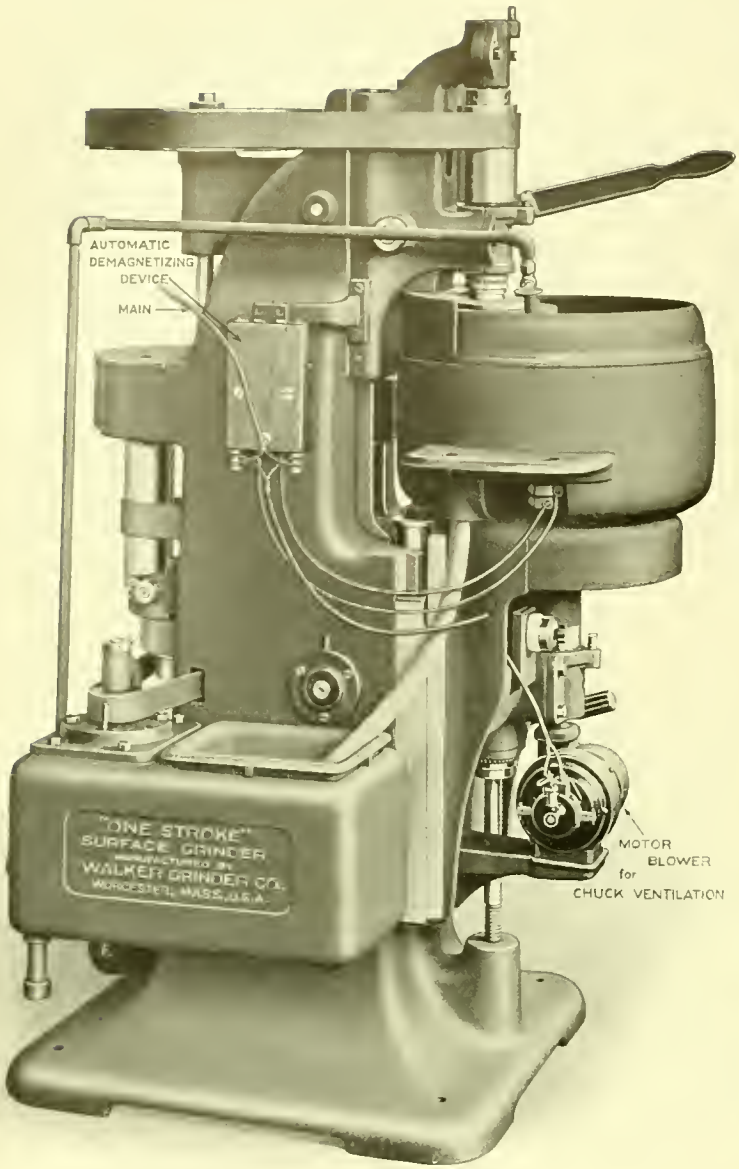


Fig. 2
Single-stroke Surface Grinder Arranged for Wet Grinding

The chuck spindle has a large pulley driven by a belt passing over two idlers and through a slot in the column to the driving drum. The drum, which runs loose on the shaft, is locked for operating by a clutch, one part of which is fastened to the drum and the other to the shaft; the drum, which rests on a collar, being operated by pivoted and forked levers, push rod and rocking lever from a stud on the vertical slide. As a result, when the slide is thrown upward the drum is raised out of mesh with the clutch and the work spindles stopped. When the lever is lowered this process is reversed and the starting and stopping entirely automatic.

The drum shaft is driven from the main shaft by reducing gears which give two changes of speed, and the countershaft has its driving pulley in the inside of the column, the tight and loose pulleys only projecting from the machine. From the driving pulley a belt passes over two idlers to the driven pulley on the vertical shaft. The machine, being entirely self-contained, is easily adapted for motor drive.

The main part of the magnetic chuck is ten inches in diameter, and its magnetic face has a water guard for protecting the contact rings and the brushes. The spindle is hollow and the blower is directly connected to a small motor fastened to a shelf on the vertical sliding knee.

The device for demagnetizing the chuck is of particular interest. To get rid of the more or less objectionable feature characteristic of magnetic chucks, that of retaining a slight residual magnetism after the current has been cut off, a separate demagnetizing device has been designed for this machine, which is so arranged that the demagnetizing operation is done automatically. In this apparatus two spring contacts are carried by an arm fastened to a wheel slide, and the mechanism is contained in an insulating block. The spring contacts successively operate the charging and discharging mechanism in unison with the movement of the slide. As the operation of the lever performs this other function, the operator has one hand free for the work.

The carbon truer, designed to keep the face of the wheels true and at the same time parallel with the chuck face, is arranged to slide on the platen underneath the wheel. The carbon is set in a shouldered stem fitting a hole drilled in the top of a flat holder in an oblique direction, the angle being thirty to forty-five degrees from the vertical. When a flat spot has worn on the carbon the stem can be swivelled slightly and flattened in a new position, thus perpetually providing a means of attaining new cutting points on the carbon and a keen cutting surface on the grinding wheel.

The Commonwealth Motor Mart

The amazing growth of the automobile industry and the demand for proper quarters for the further development of it are being shown in several places in Worcester, at this writing. A notable example of this is the garage of the Commonwealth Motor Mart at 96 Commercial Street. This building, formerly the White Garage, has been extended 15 feet to the street line, another story added and the basement and lower floors made into a modern garage.

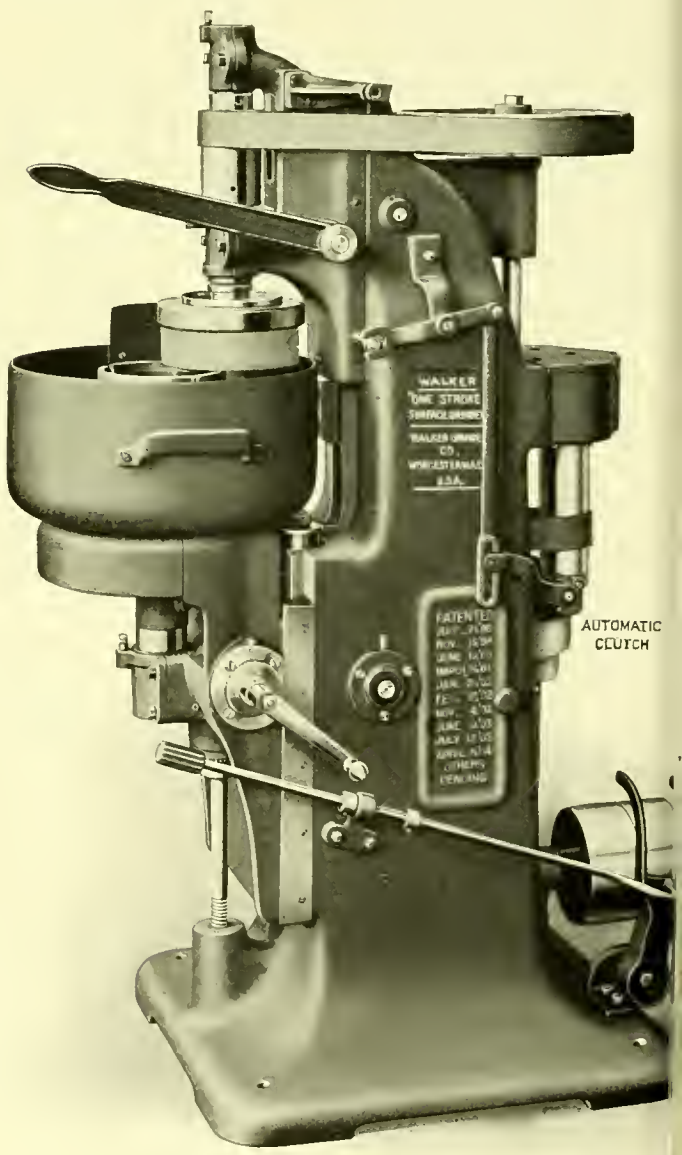


Fig. 1
Single-stroke Surface Grinder Arranged for Dry Grinding

The entire building has been leased by D. A. Baldwin & Company, who will use the three lower floors and basement, 24,000 square feet in all, for the conduct of their business. The basement is reached by a runway direct from the street and will be used for the storage of cars. The street floor contains the offices, patrons' room, wash-room and a large area for the handling of cars. The second floor is the repair department. Here is found a complete plant for tire repairs, wood working machines, an adequate machine shop, a tank for compressed air, and an autogenous welding outfit which, the concern claims, gives them unequalled facilities for welding and repairing broken parts and castings, as no other garage in the city has such an outfit. Mr. Baldwin states that on this floor there is a full complement of machinery for building any part of a motor car. The third floor will be used for the storage of cars.

Mr. D. A. Baldwin, the senior partner of the firm, has had a long experience in his chosen line, having been with the Pope-Hartford Company of Hartford, Conn., also the Compound Automobile Company, and the Hubbard Motor Company, of Middletown, Conn. Since coming to Worcester, he has been connected with the Pilot Garage and the Franklin Square Garage. In June last he purchased the repair department of the latter concern and in February of this year moved it to his present location. The repair crew, as now constituted, is composed wholly of men of factory experience, and it is the intention of the firm to turn out work which will place them in the front rank of motor car repairers. Their reputation for skill is becoming widely known, for work is being sent to them from distant points in neighboring states. A line of small auto supplies is carried, including "Diamond" tires.

The Provident Life & Trust Company

We have been favored with a copy of a very pretty souvenir issued by the Central Massachusetts general agency of the Provident Life & Trust Company. It is a splendid specimen of the printer's art, and with its half-tone portraits and brief biographical sketches will be much appreciated by the friends of the men of this office. Under the inspiring leadership of General Agent Lester V. Bailey, this agency has taken a place in the front rank of life insurance agencies, and is a worthy representative of a worthy company. The Provident enjoys an enviable reputation for most excellent management. The business of last year showed a substantial gain over previous years. The death rate is remarkably low and the economy in matters of expense highly commendable.

E. A. Buck & Co., Oil Dealers

An independent oil concern with an established trade in every part of New England is rather of an unusual asset for any community in this section, but E. A. Buck & Company of East Worcester and Casco Street are in this class. The rapid expansion of the business of this company, of which Mr. E. A. Buck is the sole owner, caused the removal of its headquarters from Palmer to Worcester three years ago. The inducement was Worcester's superiority as a transfer and shipping point—a reason that has made Worcester a most desirable location for all mercantile and manufacturing enterprises doing business east of the Hudson.

Starting with an equipment of one tank wagon, a pair of horses and storage capacity of 1200 barrels, the volume of business transacted here has grown until it now requires five tank wagons, several small delivery teams and twenty horses, storage capacity of 12,000 barrels and a number of tank cars. From fifteen to eighteen hands are constantly employed.

Up-to-date storage tanks and the latest appliances for filling barrels are found in the plant, also cooperage and repair departments. Nozzles that close automatically when a barrel is full prevent waste by carelessness, and the old-fashioned way of

(*Continued from page 167.*)

the near future, and it pledges to the President and the Secretary of State the hearty support of the Conference and invokes the co-operation of men of good will everywhere in bringing this beneficent result to pass.

The Conference has further noted with profound interest and satisfaction President Taft's recent declaration in favor of the submission to arbitration of all matters of difference between nations without reservation of question deemed to affect the national honor, and the Conference expresses the earnest hope that the President and the Senate of the United States will give effect to this wise and far-seeing declaration by entering upon the negotiation of general treaties of arbitration of this character at the earliest practicable moment.

The Conference reaffirms its declaration of last year respecting the portentous growth of the military and naval establishments of the great powers, and calls renewed attention to the fact that the rapid development of the instrumentalities of law and justice for the settlement of international differences furnishes to the statesmanship of the civilized world the long-desired opportunity of limiting by agreement the further increase of armaments. The coming celebration of the one-hundredth anniversary of the arrangement between Great Britain and the United States definitely limiting the naval force on the Great Lakes and the St. Lawrence to four hundred tons and four eighteen-pounders, calls renewed attention to the continued menace to the peace of the world caused by the prevailing conditions, and emphasizes the fact, so well expressed by former President Roosevelt in his Christiania address, that with "sincerity of purpose, the great powers of the world should find no insurmountable difficulty in reaching an agreement which would put an end to the present costly and growing extravagance of expenditure on naval armaments."

E. A. Buck

One of the Brosnihan Wrenches

gauging barrels is done away with, and a patented scale that gives the precise number of gallons by a process of weighing prevents disputes which were once a troublesome feature of the business.

Various grades of kerosene are carried and a large volume of business has been built up on a 150 fancy water-white kerosene to which has been given the name "Brilliantene." This is made from a Pennsylvania crude oil.

The Brosnihan Wrench

The pipe wrench made by the Brosnihan Wrench Company of 31 Hermon Street has won a place for itself in the last few years against strong competition, and the steady growth of the company shows that the claims which they make for their product have a positive foundation in fact.

Some of the advantages which they claim for their wrench are: The ease with which all sizes of this wrench can be adjusted and operated with one hand, leaving the other hand free to hold and guide the pipe or rod; the firmness of the grip secured by the use of a wedge, operated by a spring, which grips the instant the handle is moved in the proper direction and releases as quickly when the motion is reversed; and the interchangeability of all parts.

The makers state that the jaws are made of tool steel, hardened and tempered in oil, that the bar sleeve is hardened by a special process and that new jaws can be secured at small cost. Another claim is that the tool can be adjusted so perfectly that thin pipe can be handled without crushing. They are made in all sizes to eighteen inches in length, the smaller sizes with wood handles and the larger sizes with steel handles, hollowed on the sides to allow a firmer grip upon the tool.

E. A. Buck & Co. Plant

The WORCESTER MAGAZINE Illustrated

LIBRARY OF CONGRESS
JUL 16 1910
PERIODICAL

THE ROOF OF WORCESTER COUNTY—MT. WACHUSETT

JULY, 1910

$1.50 per year | Published by the Worcester Board of Trade | 15 cents the copy

WORCESTER, MASS., U. S. A.

Central Supply Company

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

A visit to our warerooms will repay any intending purchaser

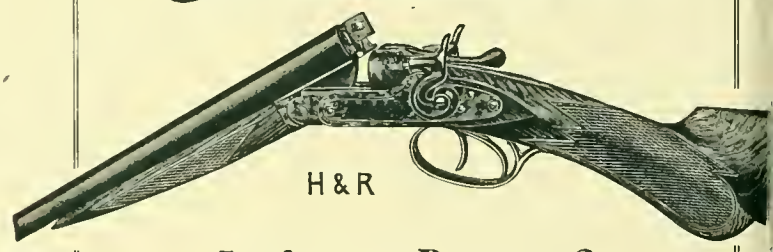
Telephone 4440

Foster, Commercial and Mercantile Streets Worcester, Mass.

TRADE H&R ARMS CO. MARK

Established 1871 — Incorporated 1888

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. JULY, 1910 No. 7

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

WACHUSETT MOUNTAIN—A Trip to the Observatory of the State—By Willard E. Freeland, 185-188

THE CENSUS OF 1910—What it Involved to Secure it in a City as Cosmopolitan as Worcester—By Herbert M. Sawyer, Special Agent, U. S. Government, 189-190

MARLBORO—A Glimpse of its Past and Present, 191-193

THE LATE R. C. TAYLOR, 194-195

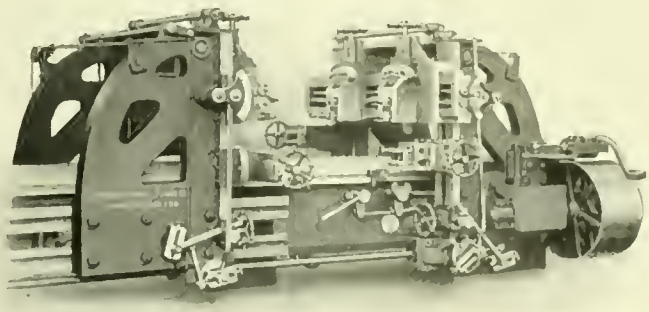
EDITORIAL REFLECTIONS, 196-197
Raising $10,000 for Playgrounds.
The International Congress.
What the Providence Meeting Means.
As to Dues.

DEPARTMENTS, 198-199
Local Trade Conditions.
Worcester Patents.
Worcester Quotations.
Current Events.

BOARD OF TRADE COMMENT, 200-204

INDUSTRIAL, 205-214

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

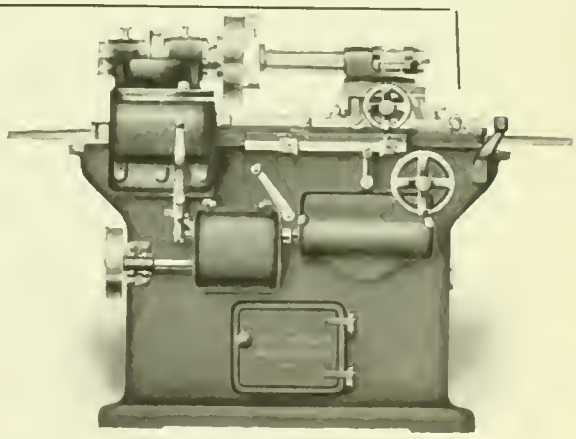
Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haebling, Dresden-A. 3, Germany and Austria.

WE MANUFACTURE

GRINDERS



CYLINDER,
PISTON RING,
INTERNAL
and
DRILL,

ALSO SASH TRIMMERS
AND EMERY WHEEL DRESSERS.

THE HEALD MACHINE CO., WORCESTER, MASS.
Works at Greendale

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

Here's your chance to try the

Coates Flexible Shaft

Opportunity is knocking now at the door of your shop.

With a **COATES** Outfit you can do the work right in position. The Coates is the flexible shaft that transmits full power forward or backward.

Save time, money and trouble on such work as **Drilling, Grinding** or **Polishing.** You're going to unnecessary expense when you tear down the machine and cart the pieces to the drill press or lathe.

Get our Bulletin W.

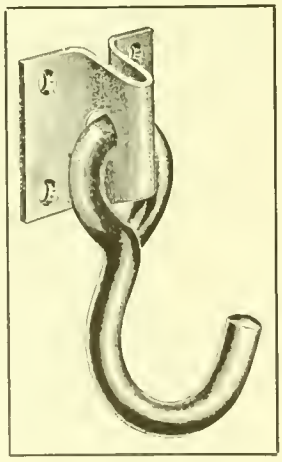
COATES CLIPPER MFG. CO.
Worcester, Mass.

THE HOWARD-WESSON CO.
Successors to
THE ART AND
HALF TONE
DEPARTMENTS
of
WOODBURY & CO

ALL ORDERS
for DESIGNS
HALF TONE
ENGRAVINGS
AND
PHOTOGRAPHS
Will receive our Prompt Attention
2670 TELEPHONES 2671
4 WALNUT ST
OFFICE No. 526

1 of 4400 Articles

Made from Wire
and Carried in Stock



The Wire Goods Co.
Worcester, Massachusetts

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

The WORCESTER MAGAZINE

Wachusett Mountain

A Trip to the Roof of Worcester County, the Observatory of the State, the Most Accessible and One of the Most Delightful Mountains in all New England

By Willard E. Freeland

"Within the circuit of this plodding life
There enter moments of an azure hue."

THUS sang the poet, and the memory of such moments will long linger in the hearts of the little party that one splendid June day viewed portions of six states from the apex of Mount Wachusett.

Leaving Worcester just as the mists of morning had been dissipated by the fast-advancing sun, under a sky of tropic blue, snugly ensconced within the luxurious seats of a Stearns car, owned and driven by Ralph H. Higgins, a prince of mountain climbers, the start was made. For this was to be no trying task with hob-nailed boots and alpenstock, but a trip de luxe over the beautiful road that the State has built that man may ascend at his ease this lonely peak.

Let those who will tell of the joys of tramping afoot over dusty roads and rocky paths to reach this sublime viewpoint! As for me, I will sing the praises of this modern chariot, which reels off the miles with no thought of fatigue, and brings changes of scenery with kaleidoscopic swiftness. How fast did we go? Truly, I don't know, but in fifty minutes from Worcester we stopped before the Summit House.

And they had been fifty minutes of unalloyed joy. Through winding roads, where arches of interlaced boughs and banks of laurel alternated with vistas of fresh-tilled fields, deep-blue lakes and pine-clad hills, we had come into beautiful Princeton, where staid old colonial homes nestle beneath spreading elms in striking contrast with the modern villas of those city-dwellers who have been drawn here by the manifest allurements of the old hill-town as a summer home.

Much of Helen Hunt Jackson's work was written here. For many years she made Mount Wachusett her summer home, and her description of "Hide and Seek Town" in near-by Princeton has attracted many visitors to this region.

Here, too, one gets his first conception of the huge bulk of the mountain, which looms above the town like some sheltering giant, forever combating the bitter winds sweeping down from the frozen north, and bidding the little people at its foot to dwell in peace beneath the benison of its presence.

Mount Wachusett from the Lake

Once through the town and past the Mountain House, whence a trail leads to the top, the real climb begins. Rounding the ox-bow, a fine view of rough-hewn Monadnock is obtained and then the road pursues its serpentine way through a veritable wilderness of trees and shrubs to bring the traveler, almost without warning, to the steps of the Summit House.

But our eyes were not for this hostelry, which the State has provided for the tourist's

comfort. The feeling that we had been magically transformed into birds of passage took possession of us. It seemed as though we had been transported high into the heavens, that we might behold the marvels of the gracious land we call our home.

Sixty-eight years ago Thoreau stood on this spot, and of this view he wrote: "On every side the eye ranged over successive circles of towns, rising one above another, like the terraces of a vineyard, till they were lost on the horizon. Wachusett is, in fact, the observatory of the State. There lay Massachusetts, spread out before us in its length and breadth, like a map.

Redemption Rock

There was the level horizon, which told of the sea on the east and south, the well-known hills of New Hampshire on the north, and the misty summits of the Hoosac and Green Mountains, blue and unsubstantial, like some bank of clouds which the morning winds would dissipate, on the northwest and west."

Seeking the best point of view we turned to the observatory shown on top of the building in the accompanying illustration of the Summit House, a building opened in 1908 by the State (the mountain has been for ten years a State reservation), and managed by Mrs. George F. Osgood. We were admitted to the observatory and furnished field-glasses. Here we found a rather difficult map prepared expressly to identify the prominent points that could be seen from this altitude of 2018 feet. The writer has been unable to find any specific description of this view with the sole exception of a monograph published at Worcester in 1872 by S. C. and M. H. Bullard—a book now out of print. In describing the view, I shall use the facts there gathered.

The most prominent objects are to the north, where

> "With frontier strength ye stand your ground,
> With grand content ye circle round,
> Tumultuous silence for all sound,
> Ye distant nursery of rills,
> Monadnock, and the Peterboro' hills."

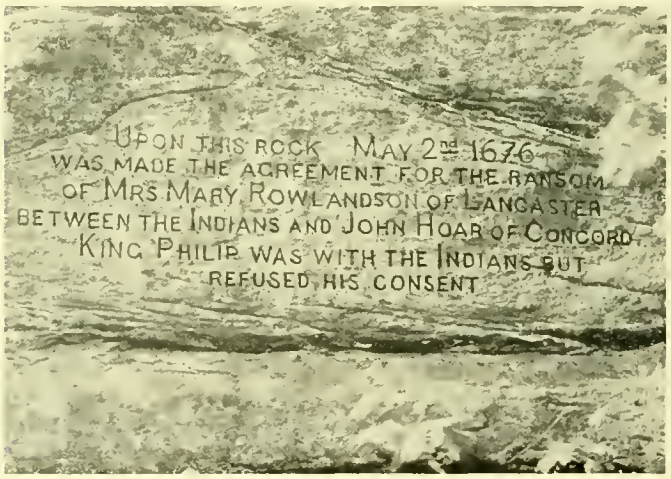
Monadnock, in the northwest, the most majestic of all the peaks seen from Wachusett, is taken for the starting point. To the right is Sunapee (sixty miles away) in the Granite State, towering over the New Ipswich group. In the foreground are the towns of Westminster, Ashburnham and Winchendon, Mass., and Rindge and Jaffrey, N. H. Next come Temple Mount and Pack Monadnock. Between is seen Kearsarge (seventy miles) and as a faint cloud directly back of it, Moosilaukee, 120 miles distant.

To the eastward of Pack Monadnock the most prominent are the Uncanoomoos, or Twin Mountains. A little to the west of these can be seen Lyndeboro Mountain. Between Lyndeboro and Pack Monadnock is Pinnacle Mountain, in direct range with the White Mountains (140 miles). When the day is clear, Mount Washington appears behind Pinnacle, its summit a little to the right. About it congregate the ghostly forms of the peaks of the Presidential range.

Over the eastern slope of Lyndeboro appears the dim outline of a distant larger mountain. This is Gunstock, on the shore of Lake Winnipesaukee, seventy-six miles distant. Between Gunstock and the western Uncanoomoo is Catamount Mountain, sixty-five miles away.

In the foreground, Fitchburg is partly hidden by Rollstone Hill, the southern part of the city showing on the left and part of the city proper on the right. A little to the right Nashua is seen in the distance. In this general direction, too, are seen Leominster, Ayer, Littleton, Chelmsford, Lowell, and with a good telescope many villages in Rockingham County, N. H., and Essex County, Mass.

Toward the rising sun, the landscape flattens out until the level sweep of the sea forms the eastern horizon. In receding order appear the towns of Lancaster, Clinton, Stow, Hudson and Concord. From Clinton southward, the sheen of the water in the great Wachusett Reservoir forms a pleasing break in a slightly monotonous prospect. Beyond, one recognizes the "Highland City," Marlboro, with its lofty standpipe on the top of Mount Sligo.



Inscription on Redemption Rock

Boston Harbor and the sails on Massachusetts Bay are easily discerned when the weather permits. Boston itself is largely hidden by Prospect Hill in Waltham. Bunker Hill monument is visible, but only as an occasional flash of light, for its stones are so closely the color of the sea that it is nearly lost in the general grayness of the horizon.

To the right a nebulous patch in the ocean of mist denotes where Blue Hill (fifty-five miles) crowns the park system of Greater Boston. In the southeast the villages of Southboro, Ashland, Boylston, Northboro, Westboro, Holliston, and Hopkinton, another hill town,

dot the landscape with gleaming evidences of man's handiwork.

Another turn and there appears a series of rounded hills apparently flattening out into a great plain. Under favorable conditions, far-off villages in Rhode Island and Connecticut may be seen. Nearer at hand, on the left, are Shrewsbury, Grafton, and the towns of the Blackstone valley.

Sixteen miles away the ever-spreading city of Worcester caps a cluster of hills. Bullard wrote in 1872: "Going farther to the right, and about sixteen miles distant, the straggling but quite picturesque city that we see is Worcester. Twenty-five years ago (1847) Worcester was represented on Wachusett only by two or three church spires, and by the college of the Holy Cross, and was difficult to point out. Even now few public buildings can be seen. But so many of her handsome suburban streets have scaled the surrounding hills that she already sits in the landscape like a "queen in the South." What a change thirty-eight years have made! With modern traffic developments the "suburban streets" of Bullard are almost in the heart of the city, and the suburbs have stretched out and have seized upon the waste places of his day to convert them into bowers of beauty, a source of pride to our citizens, and the delight of visitors. To-day Worcester is the most conspicuous of all the more than three hundred cities and towns included in the glorious prospect from this airy platform.

Sweeping westward, the observer looks down upon Princeton and, more distant, Holden, Leicester and Asnebumskit Hill, Paxton, Charlton and Spencer.

Ware Mountain in the Holyoke range is almost in line with Rutland and West Brookfield. Over Barre,

FIREPLACE IN SUMMIT HOUSE

Mount Holyoke and Mount Tom are jutting-points on the horizon.

Bullard aptly notes that "the early settlers to the southwest and west of us were evidently a hardy and high-minded people; men who feared neither bleak winds nor drifting snows."

Three miles to the west of Moosehorn Lake is Hubbardston, and a little to the north are Petersham and Wendell. Over Wendell is Greylock, eighty miles distant, and the highest elevation in the State. Greylock overlooks the Hoosac range and is in the direct line of Hoosac Tunnel.

Still more to the right, at a distance of thirty-five miles, is Rattlesnake Mountain, and beyond it the dim outline of Mount Stratton in the Green Mountains of Vermont. Passing northward a glimpse of Gardner and the profile of Little Monadnock bring us to our starting-point.

When our guide (Mr. George F. Osgood, the genial head of this happy household, who contributed much to the success of our day) pointed out Redemption Rock, a big gray boulder in a clump of trees and underbrush on one of the farms beside Lake Wachusett, it recalled the early history of this huge pile on which we stood.

SUMMIT HOUSE

When Governor Winthrop ascended the Charles River in 1632, he saw a prominent mountain many miles away in the northeast, as we learn from an entry in his journal, under date of Jan. 27th. This was from a point eight miles above Watertown, and is the first record of Mount Wachusett, as it was afterward named.

Although only a little over two thousand feet in height, 2018 in fact, by reason of its isolation and its geographical position, it is one of the prominent peaks of New England. Certainly, none of the others have become so interwoven into song and story as has this lone sentinel that has stood guard for centuries over the planting-grounds of the red men and the fruitful farms and orchards of the white.

Evidently, Wachusett Lake on the northeast side of the mountain, and the region about it, were favorite haunts of the Indians. Here is found Redemption Rock, where was enacted the last scene in a drama of early American history. On the 10th of February, 1676, Mrs. Mary Rowlandson, wife of Rev. Joseph Rowlandson of Lancaster, was captured by the Indians and taken with them as a slave in their wanderings over western Massachusetts and Vermont. King Philip was with this party, and, in the naïve history which she afterward wrote of her capture and release, Mrs. Rowlandson credits him with "interfering several times to save her from needless cruelties."

Separated from her two children—who, happily, were afterward recovered—she endured almost incredible hardships. Efforts made to ransom her were finally successful, John Hoar of Concord, an ancestor of the late Senator Hoar of Worcester, taking upon himself the dangerous task of conducting the negotiations. Upon this rock the two parties met and an in-

scription on its southern face (as shown in an accompanying illustration) tells of the outcome:

"Upon this rock, May 2d, 1676, was made the agreement for the ransom of Mrs. Mary Rowlandson of Lancaster, between the Indians and John Hoar of Concord. King Philip was with the Indians, but refused his consent."

"King Philip refused his consent!" Perchance this lonely chieftain, his tribe destroyed, himself a wanderer, foresaw the death of his own grandson, caused by vices introduced by the conquerors! Mayhap the vision of his race's decline was granted him, and he saw in this incident the defeat of all the plans and principles to which he had dedicated his life!

Many large grants of land in early times show in what estimation the early settlers held their ministers, and in this connection it is interesting to note that Wachusett was part of the grant made by the General Court in 1768 to the Rev. Timothy Fuller to compensate him for his settlement over "a heavily-burdened people in a wilderness country." He was the grandfather of the famous Margaret Fuller Ossoli, and it was to this farm that he retired when dismissed by his parishioners in Princeton. This dismissal was brought about because he opposed his people in their approval of a Constitution which permitted slavery, and their activity in the Revolutionary War, which he believed to be premature.

A few years ago Wachusett was made a State reservation, and since that time every effort has been made to add to the attractiveness of this sightly specimen of nature's handiwork. Herds of elk and deer roam through the woods that cover the flanks of the mountain, and every effort is being made to restore here all the flora and fauna which have been driven away and destroyed by the encroachments of civilization.

The building of a road of easy grade and good surface, the retention and betterment of the trails which the Indians used, and the building (in 1908) of a pretty and cozy hotel at the top, where guests may stop in comfort to see the glory of the sunrise or the beauty of the sunset, have greatly added to the popularity which is Wachusett's rightful due.

When we came down from the observatory, Mr. Osgood led us to a spot directly in front of the hotel, where nature has preserved a record of primeval history; a story which the geologist reads readily, but which the layman views with wonderment. Here, on the surface of the mother rock, are the footprints of a huge bird that lived in the long-ago ages. Sometime, when perhaps this stone was mud upon the shore of a pre-historic lake, these tracks were made and in some wonderful way preserved until erosion has laid them bare. One track which I measured was eighteen inches in length and nine inches in width, as perfect as though made but yesterday.

On another rock near by are carved many names, of which the oldest appears to be that of Solon Heywood, dated 1854. Mr. Osgood related that he had known Mr. Heywood well and that the latter was the son of Levi Heywood, the founder of the largest chair industry in the country at Gardner.

At the left of the hotel veranda is the government beacon on the highest rock of the summit, and a little below is a stone, on which is carved an arrow pointing due north, and the name E. W. Chapman, 1861. It is thought that Mr. Chapman was an early surveyor.

Did you ever experience mountain hunger? And greet with joyous acclaim the dinner call? You that are sated with the surfeits of the town-dweller, try it! The mountain air creates an appetite that only such a dinner as was served us that day could satisfy. Only that the saner views of my companions prevailed, I would have spent the rest of the day in that attractive dining-room. The dinner was "Worcester-made," for it was prepared by a Worcester cook; as loyal Worcesterites, that added to our enjoyment.

If aught that I have written leads you to keener appreciation of this marvel of nature at our very door; if, in time, your name is added to the register of visitors from every state, from Ireland and all Europe, and even from far-off Sidney in Australia, then this article has not been prepared in vain. We of New England, as a whole deeply immersed in the tide of industrial affairs, are apt to be ignorant of the attractiveness of our own country and to leave to visitors from other sections the recognition of its beauties.

When the sun was well on its western course, we embarked again in the automobile, the faithful Stearns gathered headway, and under Mr. Higgins' careful guidance we began a seven-miles coast on the homeward-bound way, carrying with us the memory of that parting view, which has not changed since Whittier so well described it many years ago:

"First a lake
Tinted with sunset; next the wavy lines
Of far-receding hills; and yet more far,
Monadnock, lifting from his night of pines
His rosy forehead to the evening star.
Beside us, purple zoned, Wachusett laid
His head against the West, whose warm light made
His aureole."

Proposed Legislation

How Iowa's Manufacturers Hope to make Iowa's Factories Grow

The Iowa State Manufacturers' Association proposes certain legislative measures "to clear the way for the growth of Iowa factories." Below is a short summary of the more interesting bills.

One of these is a "bulk sales bill," in which the sale of a stock of goods in bulk is declared void as against creditors of the seller, unless such seller shall have given creditor five days' notice of the sale. This bill is modeled after existing laws in New York and Nebraska.

Car supply and movement are considered in other proposed bills. One provides a penalty if the railroad does not supply cars for loading within four days after ordered by shipper; another orders the railroads to move loaded cars at average rates of fifty miles per day from time they are received from consignor until delivered to consignee.

"To encourage the investment of Iowa funds at home," the association has prepared a bill enabling any state or savings bank or loan and trust company organized under the laws of the State, with a paid-up capital of $25,000, to act as guardian, administrator, executor, trustee, assignee, receiver, custodian, agent or conservator of any money or property, with authority to make investment of trust funds.

The Census of 1910

What it Involved to Secure it in a City as Cosmopolitan as Worcester. The Difficulties Encountered in Obtaining the Mother Tongue

By Herbert M. Sawyer, Special Agent U. S. Government

TAKING the census in a city of the cosmopolitan makeup of Worcester is a task involving the utmost difficulties. To do it satisfactorily the most faithful and persistent work was necessary on the part of the enumerators, for it is to them that the country looks for its population. The enumerator makes the population, and after he has completed his work and the "cleaning-up" process is finished, the figures must stand for a period of ten years. The names secured in the clean-up are comparatively few in number, and the enumerator is really the census maker.

"Counting noses" in Worcester is practically completed. Taking the census in this city is a single unit in the greatest undertaking the government has under way, with the exception of the building of the Panama Canal. It is the most complete census ever taken by any government in the world, and for it the government appropriated $14,000,000. There are employed in the work in round numbers 80,000 persons. Of this number 70,000 are enumerators, the remaining being field workers and employees of the census office at Washington and in the offices of the supervisors in the various states.

The supervisor for Massachusetts is Mr. Charles F. Gettemy, head of the Massachusetts Bureau of Labor and Statistics, former secretary to Governor Curtis Guild, Jr. As his chief assistant in this work he has the services of Mr. W. G. Grundy, who had charge of the work five years ago and is thoroughly versed in the detail and difficulties of the work.

Worcester, which is the second largest city in the Commonwealth and the third in New England, and which is expected to hold that position for another ten years, was divided into two supervision districts, to which were added the towns of Southbridge and Webster.

The slicing up of the territory was done at the State House, in Boston, and each Worcester ward was divided into seven enumeration precincts or districts. Herbert M. Sawyer was appointed inspector for Wards 1, 2, 5, 8, 9 and 10, and Timothy F. Larkin, a young Worcester lawyer, was appointed inspector for Wards 3 and 4, 6 and 7, and the towns of Southbridge and Webster. There were seven enumerators for each ward, excepting Ward 2, for which there were eight appointed, and a special enumerator was appointed for each of the two State hospitals, it being the policy of the census office to appoint a special enumerator for each institution which contained a population of 350 or over. The enumerators for the two State hospitals were officials of those institutions. The enumerators for the city of Worcester were as follows:

Ward 1—Charles E. Dean, Mrs. Mary H. Fowler, Edward F. Flynn, Miss Lizzie L. Smalley, Miss Ivah W. Gale, John J. Dwyer and Harry W. Downey.

Ward 2—John Sullivan, Mrs. Ingeborg F. Fogelberg, James H. Mulcahy, Gerhard Becker, Mrs. Eva B. Squier, Charles Dennis, Mrs. Ella L. Clark, Philip G. Murphy.

Ward 3—Charles Salmon, Frederick A. Carroll, Jas. A. Russell, Daniel J. Riordan, William E. Gendron and Henry J. Flynn.

Ward 4—Morris H. Behrman, Miss Margaret M. McDermott, George L. Sweet, William H. Larkin, Frank A. McGrath and James A. Russell.

Ward 5—John D. Healey, George H. Miller, William Connors, Arthur C. Garvey and John W. Tucker.

Ward 6—Edward L. Cummings, John P. Petit, William L. Mooney, John D. Sullivan, Jr., John T. McHugh, Martin F. McNamara and Agenor C. Verner.

Ward 7—Henry R. Pratt, Austin B. Kneeland, William F. McGee, Frank A. McGrath, Mrs. Lucy A. Rey-

Herbert M. Sawyer

Timothy F. Larkin

nolds, Arthur T. Squires, William E. Gendron and Eugene F. Boyce.

Ward 8—Daniel J. Marshall, Joseph F. Lappin, John F. Rooney, Thomas C. Carver, George A. Sweeney and William A. Warden.

Ward 9—Mrs. Mary E. Beebe, George M. Mann, Edgar J. Rourke, John Sullivan, William E. Hanglin, Thomas J. O'Donnell and George T. Dominis.

Ward 10—Edmund P. Cunningham, Mrs. Jennie C. Busby, Mrs. Cora V. Thayer, Frank J. McAuliffe, John M. Bailey, Edward S. Gregory and Stephen C. Earle.

The enumerators were selected from a civil service list of 150 names, examinations having been taken in Worcester in February. Several of the appointees, by reason of having accepted other positions or for physical reasons, were not able to qualify, and the government left the district to which these enumerators were appointed until other enumerators had completed their district, and if their work was satisfactory they were assigned the vacant district, which somewhat delayed the work. Before starting on their work the enumerators were given instructions by their inspectors, and it was April 15 before they finally got to work.

The method of taking the population differed from other years in that it was more complicated, involving more detail work on the part of the enumerators.

The government required that the enumerators secure from each person his place of birth, also the place of birth of his mother and father and the mother tongue in each instance. This proved to be a stumbling-block, and it was not until after several conferences with the local supervisors that this feature of the work was made clear, as in entering the information on the schedule it was necessary to abbreviate the name of the country and give in full the mother tongue.

As there are several mother tongues in many countries, it required persistent questioning to bring out this information correctly. As an illustration a person born in Russia might have as his mother tongue one of several languages, including Armenian, Finnish, German, Greek, Lithuanian, Polish and Yiddish. A person born in Turkey might have as his mother tongue Armenian, Greek, Syrian, Turkish, Yiddish, Bulgarian, Montenegrin, Servian. As Worcester has a large representation from Russia and Turkey in Asia, and a few from Turkey in Europe, the mother tongue was largely divided between Lithuanian, Armenian and Yiddish.

Other countries also largely represented in the population requiring answers to the mother tongue questions were Ireland, England, Canada, Germany, Italy, Scotland.

In taking the population in Worcester the chief difficulty among the foreign-born population was to convince them that in answering the questions of the population schedule, no use would be made of the information for taxation, legal entanglements or the army draft.

To prepare the foreign-born people for the visit of the census enumerator, the fact that the census was to be taken was announced in the public schools, with the request that the children of the foreign-born persons assist the enumerator in securing the information from the parents, many of whom could not speak English. Ministers in the churches where foreign-born people attend and who are not especially familiar with methods in the United States, announced the fact of the taking of the census to their congregations and requested them to answer the questions of the enumerators. It was made clear that the information sought was to be used solely for statistical purposes, and was neither to be published or used in any other way to disclose facts regarding any individual or enterprise.

A penalty was attached to the law so that persons would be obliged to answer the questions in the populations schedule, of which there were 32, and the local inspectors were placed under oath, as was each enumerator, not to make public any facts concerning the census or to announce any figures of population by enumeration districts or as a whole.

The work of taking the census was completed early in May, but the enumerators were busy well into June in making what is known as "back calls." It was not possible to find every person at home when the first call was made, and the enumerator was instructed to make this back call until the information was obtained from every person in every dwelling. The enumerator, acting under his oath, was expected to visit every dwelling in his precinct, and every place where a person slept and called it his place of abode. It is presumed that every one of the 34,000 dwelling places in Worcester has been visited by an enumerator.

To obtain the census of our foreign-born peoples, of whom comparatively few speak the English language, interpreters were freely used, and the work was largely done evenings and Sundays, when the greater number of them would be at their place of abode. In the lodging-house sections enumerators frequently remained on duty until midnight, locating so far as possible every lodger. In the "cleaning-up" process the local supervisors had the coöperation of the newspapers in publishing coupons requesting all persons not enumerated to notify the local census supervisors, and the Board of Trade also co-operated in securing results.

It is a recognized fact that it is physically impossible to get the name of every person in Worcester, or any city for that matter, but it is predicted that when the population of Worcester is finally announced the assertion that the enumerators did their work well will be substantiated.

Worcester has not fallen behind in population, but is steadily growing, and the growth is healthy and permanent, and indicates a sound, solid and successful future for the Heart of the Commonwealth.

Worcester County Genius

The Important Part it Played in the Development of the Skyscraper

In the last number of this Magazine, brief mention was made of the Howe truss, originated by William Howe of Spencer. It is interesting to note how far-reaching was the effect of this invention, as told in a late issue of the Iron Age. The part it played in the development of the skyscraper is described by Bradford Lee Gilbert, who designed the Tower Building in New York, the first "skeleton construction," a form in which the entire weight of walls and floors was borne by the steel framework. Rising to a height of 160 feet on a lot, with a frontage of only 21 feet, 6 inches, comments were freely made by skilled engineers that the first strong wind would blow the building over. Mr. Gilbert goes on to say that the construction was practically a Howe truss on end, and when the test came, a plumb-line dropped from roof to basement showed not even vibration. Thus the Howe truss played its part in modern building progress.

Marlboro's 250th Anniversary

A Glimpse of the Historical Past and Present Worth of a Neighboring City, Allied to Worcester by Ties of Social Intimacy and Commercial Intercourse

IT is interesting to note, in view of the present population of the section we are about to describe, the reasons for the settlement of the city of Marlboro, now one of the leading shoe manufacturing centres of the country. Following is a copy of the quaint petition (May, 1656) of the early settlers:

"To the Hon. Governor, Dep. Governor, Magistrates and Deputies of the General Court now assembled in Boston.

"The Humble Petition of several of the inhabitants of Sudbury, whose names are here underwritten showeth:—That whereas your Petitioners have lived divers years in Sudbury, and God hath been pleased to increase our children, which are now divers of them grown to man's estate: and wee, many of us grown into years, so that wee should bee glad to see them settled before the Lord take us away from hence, as also God having given us some considerable quantity of cattle so that wee are so straightened that wee cannot so comfortably subsist as could be desired; and some of us having taken some pains to view the country, wee have found a place which lyeth westward about eight miles from Sudbury, which wee conceive might be comfortable for our subsistence.

"It is therefore the humble request of your Petitioners to this Hon'd Court, that you would be pleased to grant unto us eight miles square for to make a plantation.

"If it shall please this Hon'd Court to grant our Petition, it is further then the request of your Petitioners to this Hon'd Court, that you will be pleased to appoint Mr. Thomas Danforth, or Liestenul Fisher to lay out the bounds of the Plantation, and we shall satisfy those whom this Hon'd Court shall please to employ in it.

"So apprehending this weighty occasion, we shall no further trouble this Hon'd Court but shall ever pray for your happiness."

City Hall

Part of the territory petitioned for had already, at the request of the apostle Eliot, been granted to a branch of the Natick Indians, and was known as Oekoocangansett.

The English plantation, as laid out, included the present townships of Marlboro, Northboro, Southboro and Westboro. The plantation was first called Whipsufferage or Whipsupernicke, and the first town meeting was held Sept. 25, 1656. On June 12, 1660, owing to the rapid growth in population, the plantation was incorporated as a town and named Marlboro.

The first church was built in 1663 and was burned by the Indians in 1676. When King Philip's War broke out in 1675, several garrisons were established in the town, but in March, 1676, were withdrawn, as it was thought the place was secure from attack. Four days afterward, on Sunday morning, March 26, 1676, when all the people were assembled in the church, the Indians appeared. The settlers ran for the nearest garrison-house, and one man was severely wounded while assisting an old lady who was lagging behind. Unable to protect their property, the town was practically destroyed.

The Indians, numbering about 300, encamped near by for the night, and were surprised by the settlers, who, under the lead of Lieutenant Jacobs, killed about forty of the Indians without loss to themselves. The Indians in reprisal attacked the settlement in Wayland, then a portion of Sudbury, and massacred a large number of the white people. The horror this created broke up the settlement at Marlboro and most of the families returned to the older towns.

At the close of the war the people returned, and in 1677 erected a new church, an unfinished affair, thatched with straw. In 1688 a very grand church (for those days) was built, which stood for 120 years.

The first school was "kept in Isaac Wood's

Public Library

The Bell which Hung in the Engine-house at Harper's Ferry

house," and the first master was Benjamin Franklin, supposed to be an uncle of the famous Benjamin Franklin. He received a salary of eight shillings a week.

Marlboro took a prominent place in pre-Revolutionary days. It placed itself on record as opposed to every measure of oppression. The pages of history tell stirring stories of the activity of old Marlboro's citizens when stout hearts or strong arms were demanded in our country's emergencies.

The martial history of Marlboro is one of its chief glories. Ever among the first to respond when defenders were needed, the roll of honor of its soldier dead is long. The bold attack on the Indians in 1676 has been recited. On the 31st of July, 1704, Capt. Thomas Howe of Marlboro, hearing that the town of Lancaster had been attacked by six or seven hundred French and Indians, mustered a force and marched to its relief. Owing to the superior force of the enemy, Captain Howe was defeated and forced to seek refuge in the garrison house. Two Marlboro men—Abraham Howe and Benjamin Hutchins—were killed, and several wounded.

On the 19th of April, 1775, hearing of the march of the British from Boston toward Concord, four companies of minutemen left the town to aid in repelling their attack. The old cemeteries of the city bear witness to the many men who gave their lives in the cause of freedom.

In the Civil War, Marlboro once again rushed men to the front. The total number of men furnished was 869, and the loss was large, as the regiments to which the Marlboro companies belonged were in the thick of the fray. One of the companies the town furnished was Company G of the "Fighting Ninth," Massachusetts' famous Irish regiment. Twenty-six Marlboro men were in Company K of Worcester of the 57th Mass. Infantry—the regiment which lost a larger percentage of men than any three-year regiment that the State furnished. Seven names of these twenty-six are now inscribed on the Soldiers' Monument.

One of the Marlboro companies captured the famous John Brown bell which hung in the old brick engine-house at Harper's Ferry. This now occupies a prominent place on the front of the G. A. R. building in Marlboro.

This old bell, second in interest only to the "Liberty Bell" in this country, has had a notable history. It was to have sounded the call that John Brown believed would be the first peal of the death-knell of slavery; but the time for the beginning of a successful appeal to arms had not yet arrived, and the old engine-house witnessed the last fight that John Brown was to lead.

Fifteen men of a Marlboro company (Company I, of the Thirteenth M. V. M.), under the lead of Lieut. David L. Brown, took the bell from the belfry on Fast Day, Sept. 26, 1861, loaded it on scows and took it across the river. Permission was secured from the War Department to appropriate the bell. The bell was stored on the canal boat "Charles McCardell," which served as the officers' quarters for a time. The canal boat followed the regiment to Williamsport and the bell was landed there. A bargain was made with William Ensminger, a canal boat owner, to care for it with other company property.

From that time the bell dropped out of sight until, in 1892, some of the Marlboro veterans went to Williamsport and found Mrs. Ensminger alive, but now become Mrs. Snyder. At the time of the battle of Antietam she had had the bell buried by one of her slaves. After seven years she had it dug up and rehung on its old frame. Mrs. Snyder visited Marlboro later, and was the first to ring the bell after it was hung in its new situation on the front of the G. A. R. building.

JOHN P. STEELE
Pres. Board of Trade

Through the efforts of John A. Rawlins, Post 43, G. A. R., and many citizens, funds were raised to bring the bell to Marlboro and James M. Gleason brought it from Williamsport. The station agent, who started the bell on its way, said to Mr. Gleason: "I am glad it is gone, for as long as I can remember, every time the Democrats had a victory, that old bell has rung from here to Hagerstown and back, all night celebrating."

The old engine house itself was sold at the time of the World's Fair in Chicago for $10,000.

Company F of the Sixth Regiment was one of the first to volunteer for the Spanish-American War and took part in the campaigns in Cuba and Porto Rico. The loss from this company was fourteen men. The city was also represented in many other military organizations during this war.

The two hundred and fiftieth anniversary of the incorporation of the town and the twentieth anniversary of the granting of its city charter were celebrated with fitting ceremonies June 11-14. The celebration was made a general holiday, and the presence of over fifty thousand visitors, Governor Draper, the mayors of a number of cities and other prominent officials helped to make the affair a notable success.

The Marlboro of today is a city of 15,000 population, with fine public buildings, good schools, a well-equipped public library, factories, stores and well-paved streets. Two railroads and two street railways give ample transportation facilities. The following quotation from a leaflet issued by the Board of Trade shows how the city's largest industry is growing:

FRANK L. GAGE
Sec. Board of Trade

"Marlboro has long excelled in the manufacture of boots and shoes. In 1905 it ranked as the eighth city of the United States, and is now fifth in New England in the value of its production. In 1900 the value of boots and shoes produced was $3,853,000. In 1909 the value of boots and shoes produced reached over $10,000,000, showing an increase in nine years of more than 150 per cent., a record probably unequalled by any other boot and shoe producing city in the country."

The Board of Trade is embarking on a publicity campaign, using at the present time space in the trade journals of certain industries which it would like to attract to the city. It is working along the line of diversifying the industries of the city, and is in touch with two or three propositions that it believes will be of material benefit. It has been through the experience, usual to most commercial organizations endeavoring to bring new industries to a city, of offering bonuses and other financial inducements to bring new factories to Marlboro, and has profited by the lesson. Today it is using approved methods of publicity and personal work to set forth its natural advantages, but is reserving its funds to help its infant industries.

The Oldest Industry

Two Instances Cited to Show the Growing Interest in Agriculture

The Denver, Col., Chamber of Commerce, in conjunction with the Fort Collins Chamber of Commerce and the faculty of the State Agricultural College, have formulated plans for the future development of the agricultural industry in Colorado. The work of forming agricultural clubs among the young people of the State will be begun at once under the direct supervision of the college. Considerable money has already been raised to provide premiums for the best specimens of various crops.

Professor E. G. Montgomery of the Nebraska State University addressed the members of the Lincoln, Neb., Commercial Club at a recent meeting on the topic, "Seed Corn." The opening words of his speech tell of a condition which is becoming true wherever commercial bodies exist: "The spirit of this meeting called by the Lincoln Commercial Club for the purpose of informing itself regarding the seed corn situation of the State, exemplifies the new condition which has taken place throughout the whole central West, namely, the closer co-operation of the city and country."

St. Louis Objects

The secretary of the St. Louis Business Men's League has entered a formal protest against a pamphlet recently issued by a Detroit commercial organization which credits the latter city with the largest increase in the number of its wage earners and in the value of its manufactured product of all the cities in the United States. The St. Louis secretary, William F. Saunders, quotes from Bulletin 57 (1905), of the Census Bureau, which he claims is the latest non-partisan information, to prove his contention that St. Louis still leads Detroit.

A novel method of calling on their customers has been adopted by the Wholesale Merchants and Manufacturers' Board of the Toledo (Ohio) Chamber of Commerce. Their salesmen will visit the trade together in seven-passenger automobiles. A regular advance man will go ahead, secure hotel accommodations and make the necessary appointments.

"More Farms for the People and More People for the Farms," is to be the slogan of the Tennessee State Board of Trade, which has just been effectively reorganized.

A Severe Blow

Profound Loss to this Board in the Closing of the Careers of Three Men of Prominence in this Community Since our Last Issue

Ransom Clarke Taylor

NOT often are we called upon to report so great a loss to the Worcester Board of Trade as the organization has suffered since the Worcester Magazine last went to press. Three members of this body, distinguished in widely different lines, have passed to the great beyond in the last thirty days. Not alone is the loss ours; the community, too, regrets the passing of this trio, who, through long and active lives, had done so much to advance the interests of their home city.

Ransom Clarke Taylor, a power in Worcester real estate, the largest individual taxpayer in the city, and the developer of a great portion of the mercantile district, died at his home, 770 Main Street, the 20th day of June, the result of cerebral hemorrhage. He was born in 1829 at Winchester, N. H., the son of Charles and Susan (Butler) Taylor. In 1833 his family removed to Northbridge, where his father began a meat business. Mr. Taylor attended the district schools and at the age of seventeen left home to begin the manufacture of by-products of his father's business.

In 1847 he bought "his time" for $300 and opened a meat business in Sutton. In 1851 he removed this business to Worcester. In this business he made a fortune, his trade expanding until he had branches in many cities in New England and New York.

RANSOM C. TAYLOR

As a young man he was very successful and became one of the most influential merchants in the city. After twenty years in this business, he retired to devote his time wholly to real estate.

Unusual sagacity and foresight marked his investments in this line, and he and his family controlled large holdings on our main business streets. Always keeping in advance of the demand, he erected the first five, six and seven-story business blocks in Worcester.

One thing Mr. Taylor always had: a strong belief in the future of the city of Worcester. His faith in the city's future prosperity was such that he embarked without hesitation in enterprises that were absolutely dependent upon the continuous growth of the community. Extensive investments and improvements attested the sincerity of his belief, investments that now produce a large income which in future years will undoubtedly be greatly increased. Not only was Mr. Taylor a gainer by his intuitive knowledge of future growth along realty lines, but the city also profited greatly by his foresight.

Extensive properties in Providence and Pawtucket, R. I., and Newton and Taunton, Mass., make the Taylor estate one of the large estates of New England.

He served two terms as Alderman, and was one of the founders of the First National Bank, of which he was a director for twenty years.

He gave largely to such charities as appealed to him. He was noted as a lover and driver of good horses; his chief recreation was to hold the ribbons over fast horses, and he was always ready for a brush with other horsemen.

In 1850 Mr. Taylor married Mary Louise Chase of Sutton, who died in 1878. These children survive him: Ransom F., Forrest W. and Emma T. of this city and Mrs. Harry P. Davis of Pittsburg, Pa.

In 1880 he married Mary S. Stevens of Newton. The children of this union are Willard S. of Worcester and Mrs. Florence C. Ruprecht, the wife of a German army officer.

He leaves two sisters, Mrs. Mary P. Gilman and Mrs. R. James Tatman, both of this city.

Robert Horace Chamberlain

On June 28th General Robert Horace Chamberlain, at the age of 72 years and 12 days, died at his home, 3 Oberlin Street, of paralysis. In his youth a machinist, his talent and enterprise brought him public honors, and his final illness forced his resignation from one of the high offices in the gift of our citizens, the position of sheriff of Worcester County, which he resigned Jan. 14th of this year.

ROBERT H. CHAMBERLAIN

EDWIN T. MARBLE

He was born in Worcester June 16, 1838, the youngest son of Thomas and Hannah (Blair) Chamberlain. He obtained his education in the public schools, afterward attending Worcester Academy. When eighteen years old, he entered the employ of Ball & Ballard, machinists, as an apprentice, leaving their employ Sept. 25, 1862, to enlist in Company A, Fifty-first Regiment, Massachusetts Volunteer Militia.

He served with his regiment in many engagements in North Carolina, and in the pursuit of General Lee after the Battle of Gettysburg. He was mustered out July 27, 1863, with the rank of sergeant. July 20, 1864, he accepted a commission as lieutenant of Company F, Sixtieth Regiment, and was again mustered out Nov. 30, 1864, with the rank of captain.

After the war he became much interested in militia affairs. In 1865 he reorganized the Worcester City Guards, and was the first captain of the company, serving in that capacity for two years. Turning his attention to the artillery branch of the service, he reorganized an artillery battery, which was called the Chamberlain Light Battery. He was commissioned major and afterward was made colonel of the Tenth Regiment. Dec. 31, 1868, he became brigadier-general of the Third Brigade, retiring in 1876.

In 1867-70 he was a member of the Common Council; 1870-87, Superintendent of Sewers; 1888-91, Master of the House of Correction; 1892-1910, Sheriff of Worcester County.

General Chamberlain was a charter member of George H. Ward Post, G. A. R., and a member of the Loyal Legion. He was a prominent Mason and held the positions of treasurer of the Board of Trustees of the Masonic fraternity and treasurer of the Masonic Mutual Relief Association. He attended the Union Congregational Church, of which he was a member. He was also a member of the Hancock Club, and a long-time member of this Board of Trade.

General Chamberlain is survived by his wife, formerly Esther Browning of Hubbardston; two daughters, Mrs. Flora B. Weatherby and Miss Mabel S. Chamberlain, and three grandchildren. Thomas Chamberlain of Boston is a brother.

Edwin Tyler Marble

Edwin Tyler Marble, president of the Curtis & Marble Machine Company, for over half a century prominent in the industrial and civic life of Worcester, died July 3d, at his home, 986 Main Street. He was 82 years, 10 months and 15 days old. His birthplace was Sutton, his parents being Royal Tyler and Ann B. (Clement) Marble. He attended the district schools and the Worcester County Manual Training School, now Worcester Academy.

In 1841 his parents removed to Worcester, and in 1845 he entered the employ of Albert S. Curtis as an apprentice. He rose to the position of superintendent for E. C. Cleveland & Co., manufacturers of woolen machinery, after working for several of the machine builders of that early day.

In 1863 he formed a partnership with Albert Curtis, which continued until Mr. Marble acquired Mr. Curtis' interest in 1895. In that year the business was incorporated, and to-day the Curtis & Marble Machine Company, with the four sons of Mr. Marble holding the responsible offices of the business, is distributing its widely known line of textile machinery wherever such machinery is used, both in this country and abroad.

Mr. Marble held many public offices, his tenure of office in every case being characterized by the efficiency of his work. He served on the School Board in 1860 and 1872-80; in the Common Council, 1866-68; in the Board of Aldermen, 1869-72; as Representative to the General Court in 1870; in the State Senate, 1887-88; and on the Board of Directors of the Public Library, 1887-92, the last year as President.

Mr. Marble was a director of the Worcester Trust Company and vice-president of the People's Savings Bank. He was also president of the Home for Aged Men.

He was an active member of the Worcester County Mechanics Association, serving as President of that organization in 1877-79. He was a member of the Board of Trade for many years, serving as a director in 1891-94. He joined the Piedmont Congregational Church in 1874, was a deacon for thirty years, and was made deacon emeritus for life when he was forced to give up his regular attendance.

In 1850 he married Harriet H. Chase of Shelburne Falls, who had been a teacher in the Worcester schools. Mrs. Marble died in 1892 and a daughter, Harriet, in 1906. Four sons, Edwin H., William C., Charles F. and Albert C., survive him.

Editorial Reflections

Raising $10,000 for Playgrounds

THE successful termination of the campaign to raise $10,000 for the equipping and maintenance of playgrounds in Worcester, is another evidence of the philanthropy and public spirit of the men and women in the Heart of the Commonwealth.

It may be that our city government would eventually have appropriated some money for this purpose, but it is not believable that they would have appropriated this year $10,000, or anything like it. Indeed, the manner in which the Finance Committee treated the request of the Parks Commissioners for $5000, for equipping playgrounds in the parks, is evidence enough that they are not yet ready to take this proposition over in any large way.

Under the circumstances it was absolutely necessary that an independent body should take this matter up and crystallize it into tangible certainty. If the money to launch the movement this year was to be forthcoming, it must be obtained from private individuals, and if private individuals were to be incited to give for this cause it must be the outcome of a strenuous and carefully-planned campaign.

No sum of that size can be wholly raised in Worcester, at any rate, by a brass band. The spectacular is desirable and necessary always in order to call attention to what you are doing, and it was not lost sight of in this campaign, but it was only an incident. The tag day, which was perhaps the most picturesque feature of the whole movement, only netted $1700. The remaining $8300 was raised by hard, conscientious, determined work. In the struggle to get this money many men at one time or another engaged. The thirty directors, men and women, did what they could, but it is not unfair or unjust to any officer to call particular attention to the unselfish and untiring labors of the President, Mr. Geo. F. Booth.

Mr. Booth has given many evidences of his public spirit since he has been in Worcester, but never has he engaged in a cause with more enthusiasm and energy, and never was there a cause under deeper obligation to any one man than the playground movement in Worcester is to him.

No comparison is sought to be made here between the unremitting labors of the President and of those closely associated with him, among whom ought always to be mentioned, Mr. Earle Brown, Mr. Louis H. Buckley, W. Francis Hyde, Rev. Dr. McCoy, Secretary McGrath and others. Every one of these men contributed out of their time and substance largely and generously to bring the campaign for playgrounds to a successful fruition.

Mr. Brown, in particular, practically abandoned his profession for a period, and devoted himself wholeheartedly and whole-bodily to this work.

It is very largely a thankless task to engage in philanthropic movements of this kind. The wisdom of an innovation of this sort is always challenged by men of a conservative stamp, and this proved true here. Furthermore there is always the danger that the enthusiasts always attracted by such enterprises will map out a programme so elaborate and so costly that it will antagonize even the well-wishers of the cause. Furthermore, there is the possibility that no matter how successful and advantageous playgrounds have proven elsewhere, they may not prove so here. The personal equation enters so largely into the success of movements of this type that every community has to solve this problem alone.

It is accordingly still too early to predict the outcome in Worcester, but it is not too early to render due meed of praise to the men and women who raised the money necessary to try out this experiment, nor to render a still higher meed of praise to the more than 1700 persons whose contributions are going to make this experiment possible.

Having said this we feel that we ought to say that the liberal and open-handed men and women who gave this money to start the playgrounds ought not to be taxed individually and solely for their continuance.

In the 914 cities and towns in this country 336 municipalities now boast one or more playgrounds, and in 49 per cent. of these 336 cities the managing authority in whole or in part is the city itself, working through the school committee, the parks department, or both combined, or a municipal bureau specially created.

If it should prove here, as it has proved in Boston, Chicago, Cleveland, Detroit, Buffalo, Rochester, Dayton and St. Louis, that the playground is needed for the mental, moral and physical development of our youth, then it would seem that the city government of Worcester is not justified in longer refusing to take the movement under its patronage and control. Not 1700 citizens, but every citizen, should have a part and lot in it.

The International Congress

The International Congress of Chambers of Commerce, which held its biennial session in London last month, voted to hold the session of 1912 in Boston. The invitation to come to the Hub was extended in the first place by the Boston Chamber of Commerce, but eighty-eight other New England commercial organizations, including the Worcester Board of Trade, joined in the request and it was to a large extent a national rather than a local invitation, to which the international body finally responded.

The convention in this country in 1912 will be the first held in America. Sessions have been held at Liege in 1905, Milan in 1906, Pragne in 1908, and now in London in 1910. The continental nations felt that they had something to learn in coming to the new world and getting better acquainted with our business methods and with our business men, and so they listened with pleasure to the statement that the Boston Chamber of Commerce desired to entertain them when next they meet.

A congress of this type necessarily has to consider subjects that bulk large in the eyes of the nations. The whole subject of international arbitration is one of the most fruitful themes for discussion and resolution at all the congresses. How tremendous are the ramifications of this vast peace programme can best be judged when one learns that it is actually proposed to neutralize the zone in which the steamships ply back and forth between Europe and America. In the programme of the congress this subject is listed under the title of "A Proposal to Neutralize the Zones for the Ferryways be-

tween Europe and America." It requires a good deal of imagination for anybody but a statesman to conceive of the Lusitania as a ferryboat and the 3000-mile course of a Cunarder as a ferryway. This is an example, however, of the broad-gauge way in which the delegates attack the world-wide movements that confront them.

The regulation of international expositions is another pregnant topic; still others are compilation of commercial usages; customs regulations; uniformity in customs statistics, and uniformity of legislation on bills of exchange. One of the more important matters now under consideration is the question of an international postage stamp—providing one stamp for all foreign mail of all the nations in the Universal Postal Union, instead of the present bewildering diversity.

At the Congress just held in London much time was given to the consideration of the enforcement of judgments and arbitration awards pronounced in foreign countries; the advisability of all countries adhering to the Convention of Madrid, which deals with the suppression of false marks of origin on goods; methods of valuation for compilation of customs statistics and direct representation of commerce and industry at official conferences and international economic congresses.

The statement has recently been made: "If business men would say the word there would be no more wars." It is through bodies such as this that business men will some day say that word so loud it will be heard. It is therefore a matter of much more than local gratification that the Congress of 1912 is to be held in this country—a land dedicated to peace, a land where international arbitration and the beneficent conquests of commerce are held to be inseparable companions and where the sentiment for the orderly development of our civilization through concord and equity rather than through discord and war is not an ideal but a passion.

What the Providence Meeting Means

An invitation has been received by this Board to join the Atlantic Deeper Waterways Association, and it is probable that at the meeting of the Directors this month the Worcester Board of Trade will enroll itself in the membership of this excellent organization. We are entitled under the rules to eight delegates to the convention to be held at Providence, and it is hoped that not only these delegates, but many other members of this Board will find it possible to attend this highly important gathering.

The convention is to be held August 31 and September 1, 2, and 3, and Gov. Aram J. Pothier is the honorary chairman of the committee having the arrangements in charge. Some $25,000 will be raised for the entertainment of the delegates, who will number, it is expected, fully 2500. Every commercial organization and every port of entry from Eastport, Maine, to Key West is interested in this particular meeting, and it is probable that some of the most distinguished men on the Atlantic Coast will be present. The President will be there for at least one day, and the plans for the convention as outlined include two days given over to business sessions, one day to speechmaking, with Mr. Taft as the principal speaker, and one day for a visit to Newport, when a fleet of United States vessels will be assembled in the harbor of that ancient and fashionable city.

There will be at least one big banquet and a genuine old-fashioned, simon-pure Rhode Island clambake.

While the entertainment feature of this convention will be attractive, it is by no means the chief magnet for the gathering. The questions that will be discussed are of momentous interest to the entire east coast, and to no people of greater interest than to the people of New England. If it is possible for us to secure a complete system of inland waterways from Massachusetts Bay to Tampa, the greatest problem that confronts our shippers to the south will be solved. With the construction of the Panama Canal it will be possible for New England manufacturers to ship goods to the west coast at a price so much less than they are now obliged to pay to the railroads that New England will be enabled to retain its industrial preëminence.

It will cost many millions to do what it is proposed to do in this direction, but it will be money well invested, for if some of the millions that are now squandered on the creeks and shallow rivers of the West were thus employed, our commerce would be materially increased and the country as a whole greatly benefited.

No recent movement in legislation in this country has meant more to Worcester, shackled as it is to the railroads, than this means, and it ought to prove a way of escape to all Eastern communities suffering now, and liable to suffer more, from enhanced freight rates.

As to Dues

The Rochester, N. Y., Chamber of Commerce has concluded that it is the part of wisdom to change the form of its membership from corporation and firm to individual. At the last meeting of the Chamber a committee reported that it was the conviction of many of the members that personal memberships had a stimulating effect on the life of the organization. The report declared that most of the thriving commercial organizations of the country are at present on a personal membership basis. These organizations outclass others, both in numbers and active interest, it was asserted, and the committee found that under the prevailing conditions some of the largest corporations in Rochester have but one membership in the Chamber, when they should have from five to ten.

Still more interesting was the proposition submitted by the committee to increase the annual dues from $20 to $30 a year. The committee seeks to justify this advance by pointing out the sensational increase just made in Buffalo, where four classes of membership have been created: Class A, $250 a year; Class B, $225 a year; Class C, $80 a year, and Class D, $30 a year.

The Rochester people claim that the increase will only net that body $8000 a year more than they are now receiving, and claim that that sum would still leave the organization from $8000 to $12,000 short of the needed money for current expenses. It would appear from this distance that a more economical administration was needed rather than an increase in dues.

It is certain that the Worcester Board of Trade gives its members a full *quid pro quo* for the $10 they pay into its treasury annually, but we do not feel that we should be justified in asking $30 for the services that we perform, and we doubt personally if either the Rochester or Buffalo bodies are three times as valuable to their membership or the cities they serve. If a city is to maintain its commercial eminence it must possess and support a commercial organization to voice its views and defend its interest. The danger seems to be that some of these organizations in their desire to be heard above the din will lay out a plan so vast and so expensive that the communities will grow round-shouldered carrying it.

Local June Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

In retail lines seasonable weather has stimulated and materially increased the volume of trade. Conditions among textile mills show little or no improvement. Activity continues in building lines, supply houses reporting heavy trade.

Local bank clearings for May showed a total of $9,707,395, compared with $6,921,314 for the same month of 1909, showing a gain of 40.3 per cent., while compared with the corresponding month of 1906, they showed a gain of 46 per cent. Total for first six months 1910, $58,316,979 and for 1909, $41,607,505.

Failures in the county for the first six months of the last five years are as follows:

1910.

Date	No.	Liabilities	Assets
Jan.,	11	$52,294	$12,789
Feb.,	4	5,851	750
Mar.,	6	121,348	3,053
Apr.,	10	242,830	159,276
May,	9	52,226	16,746
June,	11	103,700	40,481
	51	$578,249	$233,095

1909.

Date	No.	Liabilities	Assets
Jan.,	10	$37,242	$7,270
Feb.,	9	54,043	8,847
Mar.,	11	46,701	15,656
Apr.,	17	453,787	150,769
May,	12	58,904	26,892
June,	7	15,176	3,150
	66	$665,853	$212,584

1908.

Date	No.	Liabilities	Assets
Jan.,	17	$86,506	$31,967
Feb.,	8	56,123	6,201
Mar.,	9	52,999	15,485
Apr.,	14	488,293	140,950
May,	3	5,608	2,415
June,	3	233,573	96,250
	54	$923,102	$293,268

1907.

Date	No.	Liabilities	Assets
Jan.,	13	$102,313	$35,265
Feb.,	6	60,576	10,978
Mar.,	9	61,679	7,712
Apr.,	12	298,591	141,673
May,	6	32,454	10,370
June,	10	19,843	2,830
	56	$575,456	$208,828

1906.

Date	No.	Liabilities	Assets
Jan.,	7	$130,850	$29,111
Feb.,	10	23,390	7,791
Mar.,	10	49,949	3,811
Apr.,	7	47,771	6,710
May,	11	35,567	13,906
June,	5	48,796	23,638
	50	$336,323	$84,967

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

C. A. Persons, Saddles, No. 959,591.

A compound spring support for the rear of bicycle seats, comprising extension springs suspended by their upper extremities from each of the trusses, compression springs suspended by their upper extremities from the under side of seat, rods connecting the lower end of the extension springs with the lower end of the corresponding compression springs, and bridges connecting each of these rods with the next adjacent rods.

S. H. Mason, Registering Indicator for Barber Shops, No. 960,661.

An indicating device by which the patron is notified that there is a chair vacant and that it is his turn. Each patron takes a check on entering and waits until that number is reached on the register. The register is connected by pull cords to the chairs and each barber pulls his cord when his chair is vacant.

T. H. Hall, Trap for Kitchen Sinks, No. 960,901.

A sink-trap, consisting of a catch-basin attached to the bottom of the sink, a central hollow dome standing up within the catch-basin and having lateral perforations through its sides and closed at its top, a U-shaped tubular member beneath the basin, one end thereof connected with the dome, a vertical up-take tube united with the opposite end of this U-shaped member, and provided with a tee-head upon its top end above the level of the perforations in the dome, the tee-head having a removable plug in one end thereof, and its other end adapted for the attachment of a waste-pipe thereto.

H. G. Barr, Automatic Reversing Mechanism for Drills, No. 961,334.

This device consists of a driving pulley, a reversing gear, and a clutch adapted to cause the pulley to drive direct or to throw in the gear and reverse the direction of revolution of the drill. An adjustable stop operates the clutch and regulates the travel of the drill.

Sacramento's Mayor Criticises

At a recent meeting of the Sacramento (Cal.) Chamber of Commerce, Mayor Beard of that city severely criticised what he was pleased to call the "slipshod" methods of the organization. He claimed that the last issue of the Bulletin of the Chamber contained seventy-five or eighty mistakes. It contained, he said, names of men out of the city, and firms out of existence; also the names of members so far in arrears that they should be dropped.

"A statement should not be published that there are 1059 members of the Chamber," he declared, "when they are really no longer members because they are in arrears in dues." "If we are going to do slipshod work like this," said the Mayor, "we had better quit it. If I had a ten-year-old boy employed for me who would make as many mistakes as that, I would not want him any more."

"The Bulletin is in line with the work the Chamber of Commerce has been doing of late," he added. "I can't see any good in it."

Worcester Quotations

Furnished by Thompson, Towle & Co., Worcester, Mass.

June 20, 1910.

BANKS

	Bid	Asked
Mechanics National Bank	150	.....
Merchants National Bank	170	.....
Worcester National Bank	210	.....
Worcester Trust Company	325	.....

RAILROAD STOCKS

Boston & Albany	220	last sale
Boston & Maine common	135½	last sale
Boston & Worcester Elec. common	.....	10½
Boston & Worcester Elec. pfd	40	41
Fitchburg preferred	129¾	last sale
New England Inv. & Sec. pfd	90	92
New York, New Haven & Hartford	151	last sale
Norwich & Worcester	210	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investment	75	80

INDUSTRIAL STOCKS

Crompton & Knowles pfd	147½	.....
Denholm & McKay common	200	.....
Denholm & McKay pfd	100	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd	115	118
Royal Worcester Corset Co	110	.....
United States Envelope common	55	57
United States Envelope pfd	111	116
Worcester Gas Light	275	.....
Worcester Electric Light	270	290
Wright Wire Company common	102	.....
Wright Wire Company pfd	110	115

BONDS

Amer. Writing Paper 1st 5's	88½	last sale
Boston & Worc. St. Ry. 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles deb. 6's	5¼	basis
Marlboro & Westboro St. Ry. 1st 5's	.....	95
Norcross Brothers 1st 6's	98	100
United States Envelope 1st 5's	101½	102½
Worcester Cons. St. Ry. 1st 4½'s	94½	.....
Worcester & Marlboro St. Ry. 1st 5's	.....	98
Worcester & Southbridge St. Ry. 1st 4½'s	85	90

Current Events

General

June 1. Minor S. Jameson, resident engineer of Boston & Albany Division, announces new Union Station will be ready for use in October.

3. Fire Chief Coleman receives automobile recently purchased by the city for his use.

6. Hunt, Ellis & Company, bankers and brokers, members of New York Stock Exchange, open office at 327 Slater Building.

During May, Worcester port of entry handled 1866 packages valued at $39,886, with duties of $22,351.

7. Russell McCulloch Story, instructor in history and government at Clark College, resigns to become head of Department of History and Political Science at Monmouth College, Monmouth, Ill.

8. Waldo Lincoln of Worcester appointed Chairman of the Massachusetts Art Commission by Governor Draper.

9. Statistics show Worcester violators of the liquor laws have paid $35,000 in fines during the two years of no license.

Robert K. Shaw, librarian of Worcester Public Library, elected President of Massachusetts Library Club.

Diplomas given seventy-three graduates at Worcester Polytechnic Institute.

10. Central New England Conference of the Seventh Day Adventists opens at Worcester.

Henry S. Haskins, Clark 1910, appointed Secretary of the Lake Mohonk Conference for Indians.

13. Worcester's share of the State tax for 1910 is $204,270.

15. New building of the Temporary Home and Day Nursery opens with a large reception.

16. Forty-seven graduates, the largest class ever sent out by Clark College, receive their degrees as bachelors of arts. Herbert Putnam, librarian of Congress, commencement orator.

Canton Worcester, P. M., I. O. O. F., entertains Canton La Tour of St. John, N. B.

17. Worcester Continentals entertain Putnam Phalanx of Hartford, Conn., and Amoskeag Veterans of Manchester, N. H., Gov. Frank B. Weeks of Connecticut, Gov. Henry B. Quimby of New Hampshire and Gov. Eben S. Draper of Massachusetts.

Winslow Lewis Commandery, K. T., Salem, guests of Worcester County Commandery for two days.

Worcester Academy graduates class of forty-nine.

Industrial

June 2. The Health Shoe Tree Company, incorporated with capital of $10,000, to engage in the manufacture of shoe findings; Edmund R. Ware of Worcester, president.

3. A. L. Aiken buys plant of the James H. Whittle Company for Worcester County Institution for Savings.

7. Work begins on foundation for new electric power plant of Worcester Electric Light Company.

8. Norcross Brothers Company awarded contract to build new St. Thomas Episcopal church at corner of 5th Avenue and 53d Street, New York. The work will take three years and contract calls for $1,000,000.

10. Royal Worcester Corset Company secure permit to enlarge power house; Norcross Brothers Company to do the work at cost of $10,000.

11. The Grodberg & Hirsch Pants Manufacturing Company, incorporated under Massachusetts laws with capital stock of $25,000; Isaac Grodberg president and Max Grodberg, treasurer.

The Tribe Automatic Headlight Company formed under Massachusets laws, with capital stock of $200,000. The officers are: Charles F. Pharaoh, president; John M. Bemis, vice-president; George T. Tribe, treasurer.

20. Miller-Grodberg Company, incorporated under Massachusetts laws for $10,000, to manufacture trousers.

City Hall

June 1. City bonds to the amount of $10,000 redeemed by City Treasurer DeWitt Clinton.

6. City Council votes $19,000 for repairs on public buildings.

Necrology

June 4. Dorrance Sibley Goddard, aged 80 years, 7 months and 23 days, of cystitis and senility. Long identified with wire-making, and for many years Superintendent of South Works of American Steel & Wire Company.

11. Henry E. Davis, former master mechanic of Worcester Division of Boston & Albany Railroad, at the age of 71 years and 5 months.

14. D. Wheeler Swift, 70 years and 2 days old, first President of Logan, Swift & Brigham Envelope Company, director and mechanical superintendent of United States Envelope Company, of paralysis, at his home, 23 Oak Avenue.

16. James H. Mellen, for nineteen years a Worcester representative in the Legislature, of apoplexy, at his home, 119 Providence Street. He was born in Worcester, November 7, 1845.

20. Capt. James P. Crosby, in Nashua, N. H., aged 74 years and 10 months. He was a veteran of the Civil War, was many years in the iron and steel business in Worcester, under the firm name of Crosby & Webster, and served twice in the City Council.

Interest in the Williamsport plan of industrial underwriting is spreading beyond the borders of our own country. The Brantford (Ont.) Board of Trade is raising a fund of $200,000 to be controlled by a syndicate. Two large industries have established factories in Brantford by the aid of this syndicate.

WORCESTER BOARD OF TRADE

11 FOSTER STREET
WORCESTER MASSACHUSETTS

EACH FOR ALL ALL FOR EACH
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
CHARLES H. BOSWORTH, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MAGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: CHARLES L. GATES.
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

The June Meeting

Postal Affairs, Savings Banks Insurance, and Express Rates Among the Things Considered

The June meeting of the directors of the Worcester Board of Trade was presided over in the absence of the President, Mr. Charles T. Tatman, who was in New York in attendance upon an important railroad conference, by the Vice-president, Mr. E. M. Woodward, and there were present in addition the following directors: Mr. William Woodward, Mr. Louis H. Buckley, Hon. Daniel E. Denny, Mr. Arthur O. Young, Mr. Edward J. Cross, Mr. John J. Power, Mr. S. Foster H. Goodwin.

The Committee on Legislation, to whom was referred the petition from the Cleveland Chamber of Commerce asking this board to adopt a resolution calling for an increase in the rate charged by the Post Office Department for the transportation through the mails of newspapers and magazines, recommended the adoption of a similar resolution by this board. The directors, however, after carefully considering the matter, voted to postpone definite action until a later date. Investigation of this subject shows that while legislation along this line has been strongly urged by Postmaster-general Frank H. Hitchcock, the Congress has so far refused seriously to consider his recommendations, and there is nothing that any commercial organization can do as the case now stands except to discuss the wisdom and necessity of such a proposed change.

The argument in favor of an advance is based wholly on the deficit existing in the Post Office Department.

Until recently the Post Office Department possessed no reliable figures on which to base an estimate of the cost of handling the ten classes of mail into which its business naturally and systematically falls, but some time prior to Dec. 1, 1909, a careful computation, based on the revenues and expenditures of the fiscal year 1908 was made, showing the profit or loss chargeable in that year to the handling of the several classes of mail matter and to the conduct of the registry, special delivery, and money order services.

The results obtained showed a gross income to the department from all classes of mail of $191,478,663.41, and gross expenses of $210,105,495, making a net loss from the operation of the postal service for the year of $18,626,831.59.

It appears, according to the official figures, that the profit to the government from purely letter postage was nearly $60,000,000, but this sum was entirely wiped out and a deficit created, such as has been shown, by losses principally in handling the second-class, third-class, registry and departmental mail. The department cites its loss in these several divisions as follows:

Second-class (magazines, newspapers, etc.), $64,128,026.91; registry (registered letters), $3,878,524.61; departmental, $5,219,661.65; third class $3,229,522.12.

The department claims that there are now 27,000 publications in this country enjoying the second-class privilege, a large proportion of which are magazines, and asserts that instead of being hauled about the country for one cent a pound, they should pay nine if they were to bear their proportionate share of the cost of operating the service.

The experts in the Post Office Department are of the opinion that the magazines are the greatest sinners against the second-class rate, inasmuch as they point out that while both get the advantage of the cent-a-pound rate, investigation shows that the department averages to haul the magazines over 1000 miles, while it averages to haul the newspapers less than 300.

Another matter in relation to the Postal Department came before the board in the form of a report from the Committee on Legislation, recommending that it was inexpedient to act on a petition from envelope manufacturers and others that this board endorse H. R. 3075, introduced by Congressman Ton Velle, abolishing the printing of the return card, so called, on the corner of the government-stamped envelopes. The committee gave two hearings on this matter to envelope manufacturers, printers and stationers, and at their conclusion, by a majority vote, declared that it was inexpedient to act. The question is a knotty one, with a great deal of merit in the proposition to retain the printing of the return card by the government, as well as in the proposition to prohibit such printing by Uncle Sam. The opponents of the existing practice claim that it is a clear invasion of private rights for the government to do what the printers of the country ought to be allowed to do, and that in its working out not only the printers, but the envelope-makers and the stationers, have their output and profits materially reduced. They say that there is no appeal that can be made to either a manufacturer or a merchant sufficiently strong to cause him to buy his envelopes of the manufacturer and jobber, and have them printed with his card upon them by the printer, when he can buy the envelopes all printed for the same or less money from the government. The government contractors at Dayton, O., claim that they are able to print the return card on the envelope without additional cost because of the fact that they can print the card and emboss the stamp at one operation.

The government issues three classes of stamped envelopes—one without any return card, one with two lines left blank for the sender to fill in, and one with the business card in the corner. An interesting side-

light on the sale of the three classes at the Worcester Post Office was obtained by the Secretary for the information of the board. During the fiscal year ending March 31, 1910, there were 3,931,700 stamped envelopes sold by the Worcester Post Office. Of this number 208,000 had no printing aside from the stamp, 1,278,000 had the two blank lines, and 2,445,000 had the full special request card in the corner. If this proportion holds good throughout the country, two-thirds of all the envelopes the government sells has this return card printed in the corner free. A very pronounced effort was made at the recent session of the Congress to have this practice stopped, and it is probable that the fight will be renewed at the next session. The existing contract with the Dayton concern expires, it is understood, Jan. 1, 1912. Whether it will be renewed is, of course, an open question. In the meantime this board has voted to lay the matter on the table, for the present at least.

A communication was read from James A. McKibben, secretary of the Boston Chamber of Commerce, asking this board to endorse the project of savings bank insurance. The Secretary read communications from Mr. Alfred L. Aiken, president of the Worcester County Institution for Savings, opposing such a plan, and similar expressions from the other savings banks of the city. The point made by one leading banker in this connection was that the State government had wisely divorced the national bank from the savings bank in Massachusetts, and he did not think it was either consistent or wise to unite now the savings bank and the insurance business. The directors voted it was inexpedient to act as suggested.

A letter was read from Hon. Curtis Guild, Jr., president of the American Forestry Association, asking this board to identify itself with that organization, with annual dues at $25. The subject was referred to the Committee on Agriculture.

A communication was received from Dr. Henry S. Curtis, asking this board to appropriate $100 towards defraying the expenses of the child welfare conference at Clark University. The directors voted it was inexpedient to act.

The special committee on Lake Quinsigamond asked the directors to pass a resolution calling for increased police protection at the Lake, and it was so voted unanimously. The Secretary was instructed to see the Mayor and express to him the views of the board in this direction, and he has done so, and it is probable that arrangements will be made at once to give more satisfactory attention to the situation at that point. The problem of recovering Lake Quinsigamond to the safety and sobriety that formerly characterized it, together with its beautification and development as a summer resort, is a large one, and is engaging the earnest attention and profound interest of a special committee of this board. It is predicted that its complete report, when made, will be one of the most valuable, far-reaching and important documents ever presented to this body.

A report was read from Mr. A. S. Lowell, a delegate from this body to the conference at the rooms of the Merchants' Association of New York, in which seventy-five commercial organizations participated, at which it was determined to make a concerted effort to secure a reduction in express rates. The whole subject was referred to the Committee on Mercantile Affairs, which, at a meeting held subsequently, voted to raise $100 from individual contributions as Worcester's share of the expense in making this fight. The Secretary was made treasurer of the fund, and is now engaged in raising it among local merchants.

Ex-president George F. Booth was re-elected a delegate from this board to the State Board of Trade for three years, from Oct. 1, 1910, and adjournment followed.

Loses $4,000,000 in Five Years

New York Central Claims Boston & Albany Railroad Does Not Pay Expenses

Apropos of the controversy over the advance in freight rates which well nigh convulsed the country last month, President W. C. Brown of the New York Central & Hudson River Railroad has written President Charles T. Tatman of this Board the following letter, defending the action of his road in announcing an increase.

The letter will be found of great interest to New England people because of the statements it contains with reference to the loss in operation of the Boston & Albany Railroad during the past five years by the New York Central:

"I am in receipt of your letter of the 26th, voicing protest of the Worcester Board of Trade against the 'proposed percentage increase in freight rates.'

"I am somewhat in doubt as to whether the protest is intended to be against the particular method or scope of the increase, or against any increase whatever.

"I believe the business men of Worcester intend to be fair, and doubt if there is one of them, whether a member of your Association or not, who will object to a reasonable increase in the earnings of railways (which can, of course, be made only by an increase in rates), if he will conscientiously and without prejudice investigate and analyze the conditions which confront the railroads of the country.

"Beginning early in the year a campaign for increased rates of pay was begun by organized labor. Our company fought this increase inch by inch, not for the purpose of defeating it entirely, for we believed that, in view of the large increase in the price of everything that enters into the cost of living, a reasonable increase was justified; but for the purpose of keeping the increase down to the lowest possible figures.

"In every case we have resisted up to the point of precipitating a disastrous struggle with labor, which would have cost the business interests of Worcester, and the country, infinitely more than it would have cost the railroads; and then we yielded only to the extent of demanding arbitration.

"As a result of the arbitration the payrolls of the New York Central lines have been increased something like $8,250,000 per annum.

"I sat at lunch yesterday with the presidents of five eastern railroads, and in comparing notes, we found that the increased payrolls on the lines represented amounted to something like $39,500,000 per annum.

"I think you are perhaps familiar with the fact that the New York Central leases the Boston & Albany Railroad, assuming fixed charges and paying 8 per cent. dividend on the stock. This stock is held almost entirely in New England; and, in view of the profits made in other lines of business, I do not think the return on the money invested is unreasonable.

"But, be that as it may, it is a fact that the road is being and has been for a number of years operated at an absolute loss. In other words, we have paid out every dollar we have received, and from several hundred thousands of dollars to a million per year in addition thereto as rental for the road.

"The Cleveland, Cincinnati, Chicago & St. Louis Railroad, running from Cleveland and Cincinnati by way of Indianapolis to St. Louis and Chicago, reaching the Ohio River at Louisville and Cairo, extending as far west as Peoria, traversing the very heart of the most prosperous section of the United States, and very moderately capitalized, had only paid 2 per cent. in the last two years, an average of 1 per cent. per annum on its capital stock. Unless a reasonable increase in rates can be secured, you can determine for yourself the effect the increase in wages on that road, amounting to from $900,000 to $1,000,000 per annum, will have on the ability of that road to pay any returns on the money invested.

"The Lake Erie & Western, running from Sandusky through the best portions of Ohio, Indiana and Illinois, to Peoria, has never paid a dividend on its common stock; and, for some time, has not been able to earn a dividend on its preferred. In the year 1908 money had to be borrowed to pay interest on its bonded debt, although this road is also one that is moderately capitalized.

"The New York Central has only been able to earn from 5 to 6 per cent. on its capital stock, which does not represent 70 per cent. of its value, or of the money which has been put into it; and it can only earn this by the most economical management possible.

"The Boston & Albany deficit, that is, the part of the 8 per cent. dividend on stock that the New York Central Railroad Company has been called on to make good, is as follows:

1905,	$28,355.25
1906,	450,181.84
1907,	1,339,006.33
1908,	1,624,177.95
1909,	577,834.34

"In other words, in the five years given, the New York Central has paid out of its own treasury $4,019,555.71 for the privilege of operating the Boston & Albany Railroad.

"I think you know that during the past two years we have been making a determined effort, almost regardless of expense, to pull the Boston & Albany out of the rut into which it has fallen; and I very much hope that with high class service, and with all of our commercial forces in the West doing all they can to build up and foster the business of New England, this deficit can be wiped out.

"The increase in wages amounts to between $500,000 and $600,000 per annum on the Boston & Albany; and, unless we can secure an increase in earnings, this amount must be added to the annual deficit above mentioned.

"I have gone into this matter in considerable detail and have given you the exact facts. In a word, I have tried to lay the cards in our hands face up on the table. I have done this because I have great faith in the ultimate fairness of the business men of this country, and especially of the business men of New England.

"In this connection I desire to say that the Chamber of Commerce of Rochester, N. Y., one of the best, most progressive and prosperous manufacturing cities anywhere on our lines, declined to join in the protest against an increase in rates.

"They also put themselves on record as in favor of giving the matter the most careful consideration; and, if investigation showed that the increase was necessary and justified, that the Rochester Chamber of Commerce would rather favor than oppose it.

"I don't want to give unsolicited advice, but Worcester, like Rochester, is a great manufacturing centre; and I believe that if the Worcester Board of Trade would take action similar to that taken by the Chamber of Commerce of Rochester, it would, within a very few years, result in benefits which would very greatly outweigh any possible advantage that could be secured by opposing this increase in rates; assuming that the opposition was successful, which, in my judgment, is an absolute impossibility.

"If the railroads can secure a reasonable increase in rates and the harvests this fall are up to the average, I believe the year 1911 will be the most prosperous the United States has ever had.

"On the other hand, if this very necessary and very reasonable increase in rates is denied, I believe it will result in an almost absolute stoppage of all purchase of equipment and all improvements in railroad property, because I am satisfied that the railroads will be forced to the conclusion that the authorities and the business interests of the United States are determined that the great interests represented in the transportation systems of the country shall not have fair play.

"Thanking you for writing me in this connection, I am

"Yours very truly,

"(Signed), W. C. Brown."

At the meeting of the Directors, at which this communication was read, the following resolution was unanimously passed:

"The Worcester Board of Trade does not object to reasonable increases in commodity rates if necessary for the proper conduct of the railroad business nor to a moderate increase in class rates if also necessary, but it protests against the announced increases in class rates, which it feels will be likely to result in serious handicap to the industries in this section, and will tend to lessen railroad traffic by discouraging such industries here."

Salem Plans Active Campaign

The Salem (Mass.) Board of Trade is to engage in an active campaign for city and industrial development and is contemplating hiring an experienced executive officer. "The Witch City" has in its wealth of historical material as well as its fine mercantile and industrial life ample scope for a secretary's activities, to say nothing of the chance he has to develop the commerce of that fine old port.

The commercial clubs of Superior, Wis., and Duluth, Minn., recently offered a prize of $100 to artists for the best symbolic design to be used for an emblem by these "Twin Ports."

From the Field

Projects, Prospects and Problems of Commercial Organizations From Far and Near

Hamilton, Ohio, has organized a chamber of commerce with a membership of over 300.

The Columbus (Ohio) Chamber of Commerce has secured the use of the State fair grounds for the purpose of holding a "made-in-Columbus" exposition.

Five commercial bodies in Pueblo, Colo., have united in an organization which has adopted the title of Pueblo Commerce Club.

The Omaha Commercial Club will ask the Chicago, Milwaukee & St. Paul Railway Company to build a line from Omaha into the southeastern portion of South Dakota.

The Belleville (Mo.) Commercial Club has launched a plan to raise a fund along Williamsport lines. The local banks will assist and a holding company will be formed to control the fund.

Certain stipulated sums will be donated by each bank in the city for the support of the Connellsville (Pa.) Chamber of Commerce in the belief that a live Chamber of Commerce means more industry, and more industry means larger bank dividends.

Pittsburg has a "Pittsburg plan," drawn up by a committee from the various civic organizations of the city, headed by the Chamber of Commerce, which is stirring up much interest in municipal government by commission in other cities of the State.

The Board of Trade of Vincennes, Ind., raised $94,425, to be used in locating new industries, in an unusual manner. In one week they disposed of 900 lots in the South Vincennes addition, the income from the sale of these lots amounting to the sum stated above.

"Logical Point, La.," on the hotel register indicates that a New Orleans booster is in town. This is the plan adopted to encourage the belief that New Orleans is the real place for the Panama Exposition. Crawford H. Ellis, president of the New Orleans Board of Trade, is pushing the city's claims in Washington.

The Spokane (Wash.) Chamber of Commerce is raising $70,000 to guarantee the Third National Apple Show, to assist the Fifth Dry Farming Congress and to organize an Inland Empire Commercial League. The latter project is an ambitious attempt to bind together 121 commercial organizations in the eastern section of Washington and 150 others in neighboring sections.

The Berkeley (Cal.) Chamber of Commerce by an expenditure of $114.80, made under the direction of the local inspector of census and by its other activities, succeeded in adding 350 names to the list previously secured by the enumerators. According to a Washington report, this puts Berkeley in the 40,000 class, with a population of 40,180.

The Greenville (Pa.) Board of Trade has secured a new industry, to be known as the Greenville Metal Construction Company, which will employ about 300 hands. The concern is capitalized at $600,000 and will manufacture automobile parts and equipment for steel passenger coaches. The plant will be brought from Jamestown, N. Y.

The Birmingham (Ala.) Chamber of Commerce is fostering the organization of an anti-tuberculosis society.

A new building for the use of the Chamber of Commerce is under construction in San Bernardino, Cal.

The new Chamber of Commerce building of Los Angeles, Cal., was opened June 30th with a house warming.

The Chamber of Commerce and the Board of Trade of Erie, Pa., are investigating the commission form of government for cities.

The Springfield (Ohio) Commercial Club is aiding in forming a permanent organization to construct children's playgrounds.

The Tulsa (Okla.) Commercial Club has started a campaign to raise $200,000 to be used in locating new industries.

The first step in a concerted movement for a civic awakening in Malden, Mass., will take the form of an Industrial Board of Trade building, for the erection of which some money was pledged at a recent meeting.

As the result of a teamsters' strike, the Chamber of Commerce, Commercial Club, Manufacturers' Association and the United Metal Trades of Portland, Oregon, have passed resolutions favoring the policy of the open shop.

The Nashville (Tenn.) Board of Trade is investigating the commission form of municipal government with a view to urging its adoption locally. Mr. James G. Berryhill of Des Moines, Ia., recently addressed the organization on this subject.

Titusville, Pa., is organizing a board of trade. The city once possessed a live board of trade, but it was allowed to go out of existence and the town has suffered in consequence. The business men, realizing their mistake, have taken hold of the project with enthusiasm.

The Springfield (Ill.) Chamber of Commerce has inaugurated a movement to make the city known as "the town with the spotless money." The retail trades committee, backed by a strong petition, have asked the banks to unite in an effort to furnish all the new, clean currency possible.

Commercial bodies everywhere have been taking a keen interest in the census. One of the novel ideas to help in getting a full count was used in Sioux City, Iowa, where 10,000 cards were distributed to school children to be taken home to the parents, filled out by them and returned to the schools.

The Detroit (Mich.) Board of Commerce has been conducting a publicity campaign to secure high-grade mechanics. Large newspaper space in manufacturing centres in the East and central West has been used. They have received numerous protests from commercial bodies in other cities, notably Bridgeport, Conn., and Rochester, N. Y. The promoters of this scheme claim that none of the advertisements were misleading and that the industrial conditions in Detroit, the lack of mechanics and the retardation of industrial development caused thereby, practically compelled this course of action.

Proposed Steamship Line

An Endeavor to Obtain Cheaper Freight Rates Between New England and the Southwest

The Boston Chamber of Commerce has endorsed the projected steamship line between Boston and Texas ports, the object of which is to get better rates. D. O. Ives, secretary of the New England Board of Trade and Transportation, says:

"New York has eight sailings a week for the gulf and Philadelphia and Baltimore each have arranged recently for a line. New England, which furnishes about a third of the tonnage of these lines, has not a single vessel sailing to gulf ports. What is the result? The freight rate to all Texas points, with negligible exceptions, is made by the New York steamship lines, and the rate from Boston is found by adding the cost of getting freight from Boston to New York.

"In no other section of this country do shippers as a rule pay so little attention to freight rates charged on their goods as in New England. Boston has one of the finest harbors in the world, yet it has surrendered all its advantages of location on the sea as far as communication with the gulf coast and the great interior country tributary to it is concerned. To hold what we have and secure a share of the vastly increasing trade of this great empire, lines of steamships must be established in the immediate future or our opportunity will have vanished."

An Office of Public Roads

An Example of the Widespread Interest in the Problem of Good Roads

In view of the struggle now being made in every section of this country to better the public roads, the resolution forwarded to the Senate of the United States by the Redlands (Cal.) Board of Trade is of peculiar significance:

"The undersigned respectfully ask for the enactment at the present session of Congress, Senate bill 6931, making an appropriation of $500,000 for the extension of the work of the Office of Public Roads, U. S. Department of Agriculture, in co-operation with the Postmaster General, which has been favorably reported by the Senate Committee on Agriculture.

"The enactment of this bill will result in widespread and permanent reforms in the present methods of public highway construction and maintenance, under which it is estimated that of the $90,000,000 annually expended for road improvement, at least one-half, or $45,000,000, is practically wasted, through lack of knowledge on the part of the various local road authorities. The greater part of this money could be saved by giving these local officials the benefit of expert advice and assistance by the trained engineers of a properly equipped office of public roads, and it is with this object in view that the proposed appropriation is sought.

"The farmers of all sections of the country are deeply interested in having the work of road improvement placed on a scientific basis, as they believe that the establishment of a complete system of permanently improved roads would do more to promote their welfare, and ultimately the prosperity of all the people, than any other reform. We therefore urge the prompt enactment of Senate bill 6931, so that the important work provided for can be undertaken immediately."

New Industries for St. Louis

The Success which has Attended the Efforts of the St. Louis Business Men's League

Secretary William F. Saunders of the St. Louis Business Men's League is an advocate of the "gum shoe" system of obtaining new industries. He pithily declares, "The system is the best I have tried and results show that rubber heels do better work than brass bands when one is trying to land million dollar factories."

He found that in many cases deals were blocked by financial interests in other cities when he thought that he had factories landed.

The Post-Despatch says:

"The more recent achievement of the Business Men's League is the bringing to St. Louis of the Fayette R. Plumb Co. of Philadelphia, which will erect a $1,000,000 plant on the terminal belt line near the western city limits, for the manufacture of tools.

"This concern is one of the largest of its kind in the country, and it has an established trade. A number of St. Louisans have subscribed to its stock, E. C. Simmons of the Simmons Hardware Co. taking $250,000 worth.

"The company has acquired thirteen acres of ground and the cost of its plant, exclusive of real estate, will be $1,000,000. Sixteen buildings will be erected to contain 78,000 feet of floor space. Between 600 and 1000 skilled mechanics will be employed.

"Mr. Saunders says a second large tool plant is to come to St. Louis, but that he is not now at liberty to disclose its name or present location."

Statistics Gathered by State

The Springfield (Ill.) Record lately published an article of which the following section will interest commercial organizations:

"With a view to obtaining statistics relating to manufacturing and other industries of the State of Illinois in cities having a population of 1,000 or more, Secretary David Ross of the State Bureau of Labor Statistics has prepared a detailed schedule with questions and blanks for answers which will be mailed to the mayors of cities in the class above enumerated, and to those cities which have a chamber of commerce or a business men's association, the blanks will be referred to those bodies.

"The inquiry which will be instituted by Secretary Ross has for its purpose the acquiring of information as to the special opportunities which may be afforded by each city to special investors or to persons who may have in view the establishing of manufacturing plants.

"The information so obtained will be published in bulletin form and furnished to prospective investors or manufacturers, for the purpose of impressing upon them the relative claims of the cities of the State as a field in which capital may be placed with a hope of profitable returns."

The by-laws of the Waltham (Mass.) Business Men's Association have been revised and the name of the organization changed to the Waltham Board of Trade. The yearly dues have been raised to $5, and a permanent secretary is to be employed. The great problem confronting Waltham is to secure diversified industries, and an energetic effort is being made to bring in new factories.

Influence of Commercial Bodies

How the Industrial Commissioners of Railroads Regard Communities Supporting Commercial Organizations

"Straws show which way the wind blows!" The truth of this trite saying is demonstrated by the following quotation from a live editorial in a recent issue of the Jackson (Miss.) Clarion-Ledger, in which is urged the necessity of every good citizen joining the local Board of Trade:

"A board of trade is the representative body of a city. Its personnel means much to the city both numerically and individually. Jackson is judged abroad by its business organization—its Board of Trade. It therefore behooves every representative business man in the city at once to connect himself with the Jackson Board of Trade, and lend his individual energy and influence in helping to promote the welfare of the town to which we are all devoted.

"Recently the industrial commissioners of the railroads of the country held their annual convention in Memphis. Among the proceedings of that meeting was a resolution declaring that they would not consider any proposition for the location of a mill, factory or other development of any city, unless the proposition came to them through a board of trade or other organization representing the city making the proposition. This is simply business. It means that business men must have matters come to them in business shape; that a town which has no business organization through which to submit its proposition, is a back number. Industrial commissioners of great railroads have no time to lose on such communities."

The Old Colony District

Invitations have been sent out for a meeting to be held at the Boston City Club to consider the formation of a district trade board to comprise representatives of all the commercial bodies in the Old Colony district of Massachusetts. Believing that such matters as transportation, telephone and electric light service can be better dealt with by an organization covering the whole area than by individual bodies, the promoters of this plan are pushing the matter enthusiastically. Judge Robert O. Harris of the East Bridgewater Board of Trade and Alfred W. Donovan of the Rockland Board of Trade are prime movers.

A Novel Plan Proposed

A project to establish a public aviation field at a cost of $20,000 is being considered by the St. Louis Business Men's League. It is stated that there is a crying need for such a place close to a great city, and that it would result in many of the aeroplane manufacturers building plants in the city. That a great aeroplane industry is bound to result from the work of the 3,000 or more who are building machines in this country alone, is one claim made by the author of this plan. It is expected that the opening of such a place for maneuvering by experimenters and manufacturers would establish St. Louis in the enviable position of the centre of this budding industry.

The cities of Charleston and Anderson, S. C., have chosen committees to select paid secretaries for their respective chambers of commerce.

$500,000,000 Smoke Damage

Figures compiled by the Cleveland Chamber of Commerce show that the annual smoke damage in that city exceeds $6,000,000. The United States Geological Survey is authority for the statement that careful firing will practically abate this evil and cause a fuel saving of at least 10 per cent. Their estimate of the smoke damage in the whole country is $500,000,000.

Easton Securing Industries

Easton, Pa., "The City of Resources," has a fund of $600,000 to aid in locating and developing industrial plants. The members of its energetic Board of Trade have made a decided success of this plan, yet have never put in a cent. The members loan their credit by endorsing notes and the banks loan the money. Several industries have been secured, the latest being one that will employ 250 hands at the start.

Commercial Secretaries' Association

The secretaries of the commercial organizations in Montana have recently formed an association with George M. Matthews of Lewistown as president, and C. A. Meade of Helena, secretary. The chief object is to further development and publicity work in Montana, and the Legislature will be asked to make a regular appropriation for this purpose.

The Country Over

"Hurry! Holly's hustling." This is the slogan just adopted by the Holly, N. J., Commercial Club.

The Butler (Pa.) Chamber of Commerce is raising a $5,000 fund for the employment of a paid secretary.

The Central Association of Commercial Secretaries will meet in Milwaukee the last week in September.

The Minneapolis Commercial Club is successfully carrying out a plan to retain infant industries that are offered inducements to remove from the city.

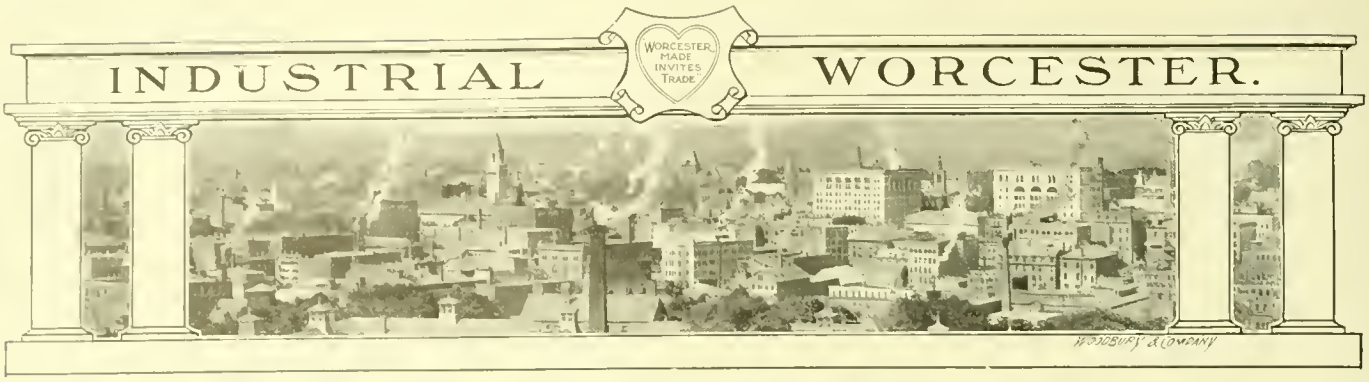
Humboldt, Tenn., has formed a business league. A salaried secretary and a permanent office will be maintained.

"City with the Iron Nerve," won the first prize offered by the Lebanon (Pa.) Board of Trade for the best slogan.

The Chamber of Commerce of Altoona, Pa., has become imbued with the get-busy spirit and has decided to form a Hundred Thousand Dollar Club to bring new industries to the city.

The Los Angeles (Cal.) Chamber of Commerce annual report shows a membership of nearly 2900. Nearly 1,000,000 pieces of advertising literature have been sent to points in the East during the past year.

Fort Wayne, Ind., has a serious shortage of homes for wage earners, and the Commercial Club is investigating a plan to organize investors into a large home-building corporation to erect, sell and rent homes to wage earners of moderate means.



The Boston & Worcester Street Railway Company

Five score and four years ago the first serious attempt was made to open up channels of communication between Boston and the neighboring towns and cities. In that year (1786) Nathan Stone and three others agreed to carry a mail between Boston and Framingham once each week, delivering this mail at Buckminster's Tavern in Framingham and Sanger's Tavern in South Framingham.

In 1790 mail and newspapers were carried between Boston and Worcester by Timothy Stearns, who made weekly trips on horseback. This route finally came into the hands of Capt. Levi Pease of Shrewsbury, who had served throughout the Revolutionary War as the bearer of dispatches and as purchasing agent for the colonial forces. He formed the ambitious plan of establishing a line of stage coaches between Boston and Hartford, but the hazards of the enterprise were so great no one would furnish the necessary funds.

Finally a young stage driver named Reuben Sykes agreed to start a coach from Hartford at the same hour that Captain Pease left Boston. Thus was started what proved to be the most important transportation line of its time. The time consumed by this trip was four days, and the fare $10.

Three times a week this trip was made and the line grew so popular that it became necessary to book seats weeks ahead. The headquarters of the line were established at the old Pease Tavern, an object of interest to an army of travelers by trolley and automobile, still standing in Shrewsbury. The first government contract to carry mail was given to Captain Pease.

Evidently the latter was a man of progress, for the first charter for a turnpike granted by the State was given him in 1808, and the result was the construction of the first turnpike, which ran from Boston to Worcester. Much of this route is followed today by the Boston & Worcester Street Railway.

By 1834 began the railroad era, the Boston & Worcester Railroad that year commencing to make trips twice each day between Boston and West Newton. The fare was 37½ cents. A copy of an early advertisement of this line is shown on next page and in this year of our Lord its quaint phrases make interesting reading. In July, 1834, when the first locomotive ran into this city the Boston and Worcester steam traffic had its birth.

It is generally conceded that the first electric road in this country operated on a commercial basis was a line 2.11 miles long, in the city of Marlboro. Worcester's first large neighbor on the old "Connecticut Way" to Boston. This road is now a part of the system of the Boston & Worcester Street Railway Company. An earlier, short line at Lynn was practically only a test line for the builders of trolley equipment. Worcester was therefore a pioneer in both steam and electric development for transportation purposes.

The year 1903 marked the inauguration of the electric era from Boston to Worcester when the present air-line, high-speed trolley system was inaugurated.

Starting at Park Square, Boston, the Boston & Worcester electric cars run through the Back Bay and Brookline to Chestnut Hill, where they first enter upon the rails of its own system.

From here the route runs through Newton Upper Falls, within sight of Echo Bridge, to Wellesley Hills. Next comes Natick Junction, from which a branch a mile long now extends to Natick. Farther along, the line crosses Lake Cochituate, a part of Boston's water system. At Framingham Junction, where the general offices of the line are located, a branch line running from Saxonville to South Framingham crosses. At this point is the State camp of the Massachusetts National Guard.

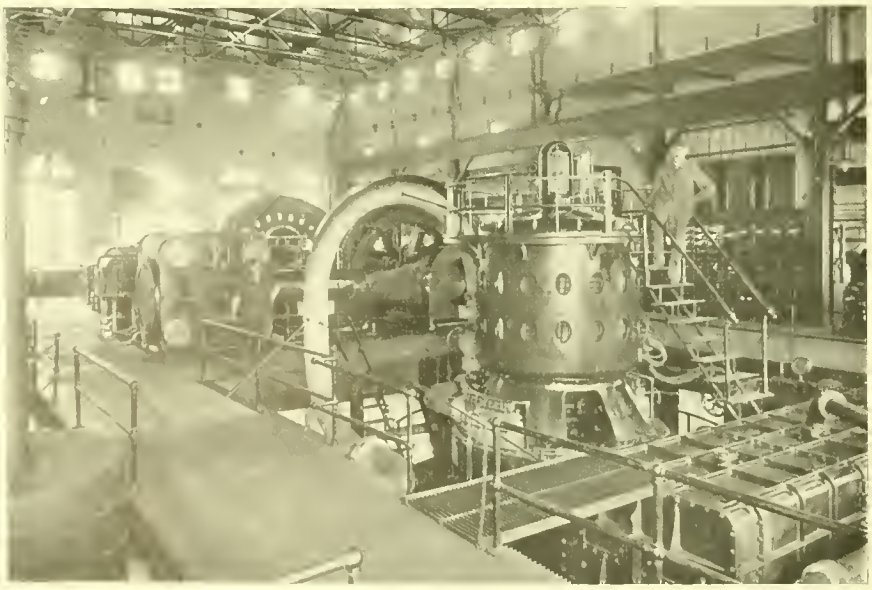
At Framingham Centre another branch enters the main system from South Framingham. Leaving the village, the building of the State Normal School is seen on the left, and then on both sides the Framingham reservoirs of the Metropolitan water system. Beyond, on the right, is the waterfall at the dam of the great Sudbury reservoir of the same system. Skirting the edge of this attractive sheet of water, through Fayville, the route extends to White's Corner, whence a branch extends through Southboro and Marlboro to Hudson. Up to this point the line has followed the old Pease turnpike, most of the way with beautiful grass plots in the middle of what has been made into a handsome boulevard.

At this point the route enters a private right-of-way through portions of Southboro, Westboro, Northboro and Shrewsbury. Everywhere are beautiful pastoral scenes, with occasional glimpses of thriving villages and delightful vistas of fertile valleys and distant wooded hills. In Westboro, the route passes close to Lake Chauncey, the buildings of the Westboro State Asylum on its farther shore, and just beyond, the Lyman School for Boys.

Leaving Shrewsbury, the line crosses the popular Lake Quinsigamond, with its pleasure grounds, and two miles beyond ends at Worcester City Hall.

The total length of the system is 47 miles, the main route being a little over 31 miles. Of this 31 miles, all but a short section in Framingham Centre is double-tracked. Figured as single track, the entire length of the system is 88 miles.

The main line is equipped with block signals, electrically operated by track circuits. This system is the invention of the company's engineer, Mr. F. L. O'Bryan,



GENERATORS AT B. & W. ST. RY. CO. POWERHOUSE

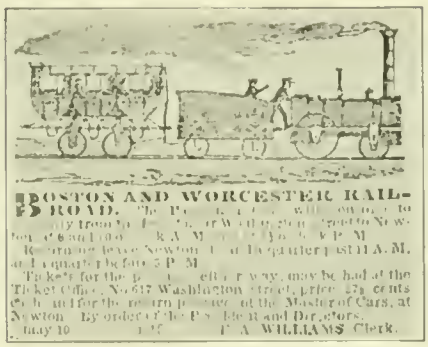
and has been pronounced by many experts as one of the safest in operation on any steam or electric road. The entire system is operated by a car dispatcher and a complete car sheet is kept, identical with the train-sheets of the steam roads.

In addition to the block signals, the western end of the main line is equipped with Blake signals, operated by the dispatcher. No car can enter upon the one-eighth mile of single track at Framingham Centre except by written orders. A safety switch in the dispatcher's tower shuts off the power on the entire system in three to five seconds. The perfected system of safeguards makes this one of the safest roads for passenger traffic in the world.

The power supply of the company is so ample that the cruelest storms have never crippled it. The central power-station, located on the Sudbury River in Framingham, has an equipment consisting of one 800 H. P. engine, with a 500 K. W. generator; one 1600 H. P. engine, with a 1000 K. W. generator, and one 2000 K. W. Curtis turbo-generator. All the auxiliary apparatus to produce economy of operation is also installed. This station produces an alternating current of an intensity of 13,200 volts.

Four sub-stations are placed at different parts of the system to convert this current to a direct current of 600 voltage, which is used in operating the cars. One at Framingham is equipped with three rotary converters, two 250 K. W. units and one 500 K. W.; at Wellesley, two 400 K. W. units and one 500 K. W.; at Westboro, two 250 K. W. units and one 500 K. W.; at Marlboro, two 250 K. W. units. The central plant is planned for additions when needed.

At Wellesley are a car house and repair shops. Here are a 300-ton wheel and gear press, brass foundry, and complete machine and blacksmith shops. At Framingham is a car house, and here are paint, woodworking and upholstering shops. Every car is cleaned by the vacuum cleaning process, and an improved renovator continues the plush seats in the best condition. Every car goes into the paint shop once a year. At Westboro and Marlboro are car houses equipped for ordinary repairing.


BOSTON AND WORCESTER RAILROAD. [illegible] A. M. [illegible] P. M. [illegible] 1831 A. M. [illegible] 3 P. M. [illegible] Tickets for the [illegible] way, may be had at the Ticket Office, No. 617 Washington street, price [illegible] cents each and for the return passage of the Master of Cars, at Newton. By order of the Directors. [illegible] F. A. WILLIAMS Clerk.

FROM THE BOSTON ADVERTISER OF 1831

The rolling stock of the company consists of 90 cars, besides the necessary service cars and snow plows. The majority of the closed cars are of the semi convertible type. Six of them, 54 feet long, are the largest closed cars in use in New England, and were built from specifications furnished by the company. Five new closed cars, designed by the company's engineers, and containing several unusual features, each seat 52 passengers. These are now being built by the Bradley Car Company in this city. They will be equipped with the very latest types of motors, air brakes and safety devices.

From its inception, the policy of the company has been "the best is the cheapest in the end." One instance by way of illustration. No cast-iron wheels are used, and to get the best steel wheels, they were formerly imported from Germany. Now they are able to secure a better steel wheel in this country than Germany can produce—a strong bit of evidence of America's progress in the metal trades.

The company claims that its equipment is purchased throughout with the single aim of securing whatever is best in material or fittings, paying particular attention to the comfort and safety of its patrons.

Worcester benefits by the inauguration of a limited service between this city and Boston, by this road. The cars leave Worcester City Hall hourly from 7.05 a.m. to 5.05 p.m., and the running time is one hour and fifty minutes. Regular fares are charged. The return service will leave Boston hourly from 8.00 am. to 6.00 p.m. The company expects that the elimination of the crowds that frequently mark the local service, the quick-running time and the certainty of good seats, will bring sufficient patronage to warrant the continuance of these expresses.

William M. Butler is president of the company; Arthur Childs, vice president, and George A. Butman, secretary and treasurer. The operation of the road is under the charge of E. P. Shaw, Jr., general superintendent; A. E. Stone, auditor and general passenger and ticket agent; M. V. Ayers, electrical engineer; F. L.

WHITE'S CORNER STATION OF THE B. & W. STREET RAILWAY CO.

B. & W. Street Railway Co.'s Offices

O'Bryan, assistant electrical engineer; E. S. McLean, master mechanic; and Joseph Johnson, roadmaster.

The company has issued capital stock amounting to $2,025,000, bonds for $1,970,000, floating indebtedness of $867,482.17.

John P. Kingston, Architect

Born in St. John, New Brunswick, in 1853, Mr. John P. Kingston, architect, 518 Main Street, at the early age of thirteen went to work in a sawmill and began there a career which has teemed with strenuosity and success. At the age of nineteen he came to Worcester and secured work as a carpenter. Successive steps as foreman, superintendent of construction and contractor gave him a large experience in every department of the building trade. His intimate knowledge of building construction proved a great help to him when he opened an office as an architect in 1891. A true gift for designing made this venture an immediate success. During his career as an architect he has won several prizes in competitions conducted by technical journals, and the result has been that houses have been built from his plans in nearly every State.

Examples of his workmanship and artistic ability standing in Worcester include the $100,000 addition to the Logan, Swift & Brigham plant of the United States Envelope Company, the School street engine house, the Bloomingdale Road and Gates Lane public school buildings, the Gladstone apartment house on William Street, the handsome residences of Edgar Reed on Woodland Street and Joseph Davis on Grove Street.

Many of the beautiful residences at Richmond Heights and Hillside also attest his skill, and several sets of plans are now in progress for elaborate dwellings at Lenox and the Burncoat Street section.

Several of the fine homes at Riverton in Watertown, and the summer homes of Alexander and John Bowler at Gloucester are the fruit of his brain.

Worcester Business Institute

From an artistic and literary standpoint, there is much to be commended in this year's catalogue of the Worcester Business Institute, which we recently received. One can scarcely fail to be favorably impressed when he sees the fine half-tones and the succinct phraseology with which the school, its aims and equipment are described.

The concluding chapter is a well-written résumé of Worcester's position in the industrial world, and the peculiar fitness of the city for the location of a thorough commercial school.

Mr. C. B. Post, the founder and head of this school, teaches commercial branches in the higher public schools, and publishes in this volume several letters of commendation from local business men who have employed his pupils.

Worcester Mailing Company

In these days of specialization, a concern like the Worcester Mailing Company, Grace L. Belknap, proprietor, 704 State Mutual Building, has become almost a necessity in the business life of a live city. The office of the big industry, even though it may possess the same equipment, turns to it when overloaded, and the small concern makes use of its equipment to meet large competitors on an equal footing. Some of the activities of this business in detail are: Typewriting, either in office or at customer's place of business; multigraphing in all colors, if necessary more than one color in a letter; addressing, folding, sealing and stamping.

The equipment consists of three multigraph machines, two of pica, or large type, and one of elite, or small type, all of the latest model which is fitted with segmental drum and allows matter once set up to be removed and retained as long as necessary. Anything from the size of a stamp to 10 by 13 inches can be printed on the multigraph, and the product is a practically perfect reproduction of work done by a typewriter. To complete the deception, addresses are filled in with typewriters having the same type face and possessing special ratchets that make the spacing exactly match that of the multigraph. Circular or advertising letters, programmes, booklets, post-cards, lodge notices and club schedules are some of the forms which are turned out with great rapidity by the multigraph.

An addressograph of the latest type is a most useful machine when matter is to be sent out to a frequently-used list of addresses. For this purpose the rapidity and accuracy obtained by the use of this machine are fast making obsolete addressing by hand or on the typewriter.

Competent stenographers are furnished for work outside of the office. Business and professional men find this service of value.

The Worcester Mailing Company was established in April, 1909, and has twice outgrown its quarters, an index of the success with which it is filling the place in our business life for which it was planned.

Mosher Real Estate Co.

One of the younger real estate businesses of the city is the Mosher Real Estate Company, Slater Building, of which Frank P. Mosher is the sole owner. The brokerage department of the business handles largely tenement property, although it is by no means confined to this particular kind of investment realty. A considerable business is being built up on realty loans. Under the name of Frank P. Mosher, as distinct from the Real Estate Company, he is conducting a business as builder and contractor, and is prepared to handle contracts for any form of construction from frame to concrete. "Three-deckers" are a specialty with Mr. Mosher, both as a contractor and as a broker. Mr. Mosher is a believer in publicity and in all his advertising adopts and emphasizes the slogan, "A Square Deal."

Golbert Last Company

The business of the Golbert Last Company, 19 Church Street, is one which has shown a consistent enlargement since its start, thirteen years ago. The addition in the past year of another whole floor to their factory space is evidence of recent growth.

Frank P. Mosher

No story of this concern could be complete which did not include the life story of its founder, Mr. R. L. Golbert. Born in Boston July 2, 1837, he came to Worcester at the age of 19, with Mr. Mawhinney, who began here the manufacture of lasts for shoes. This business became the Mawhinney Last Company, of which Mr. Golbert was a member. For forty years he was associated with Mr. Mawhinney, and when the latter proposed the removal of the firm, Mr. Golbert withdrew, retaining a part of the machinery for his share of the business.

At the age of 60, when most men are ready to retire from the cares of business, he began for himself the manufacture of lasts in the quarters of the old company. His business prospered and three years later he took in Mr. A. B. Taylor. In 1905 the business was incorporated and Mr. Golbert was chosen president and treasurer. L. A. Wheeler is secretary, and A. B. Taylor, vice-president and superintendent. At the age of 73, Mr. Golbert is still the active head of the company, a member of that wonderful fraternity of Worcester business men to whom "threescore and ten" years is meaningless except as a point of departure for the seeking of greater triumphs.

Last year another floor and additional machinery were added to the plant, and the business continues to prosper in a way that promises even greater growth.

R. L. Golbert

W. D. Kendall Company

The W. D. Kendall Company, electricians and dealers in electrical supplies, 268 Main Street, was formed in 1906, and opened a small store at 166 Main Street. Two years ago increased volume of business caused them to move to their present quarters, which have six times more floor space than the old. They carry in stock a variety of electrical and gas supplies and are prepared to meet all ordinary demand from stock. Their wiring contracts have included some of the best of recent construction in Worcester County. They do all kinds of electrical wiring and fixture work, including factory equipment, independent motors and work of similar character. They employ a staff of skilled men and the business is showing a steady and healthy growth.

George F. Hall is president and William D. Kendall, treasurer. Both are graduates from the ranks of electrical workers and have a thorough understanding of the intricacies of their craft.

F. E. Powers Company

The F. E. Powers Company, 570 Main Street, with yards and storehouses on Southgate Street, does a wholesale and retail business in coal, wood and masons' supplies.

In 1888 the late Frank E. Powers moved to Worcester from Millbury, where he had been doing business since 1877, and began a coal and wood business on Southbridge Street. During this first year, he used three horses and delivered about 3,000 tons of coal. In 1890 he moved to his present location on Southgate Street, and the business has since increased to a point where its conduct requires the services of thirty men, twenty horses and a powerful motor truck. The business was incorporated in 1909, after the death of Mr. Powers, with a capitalization of $50,000.

"The volume of business increased 50 per cent. last year, and the first months of this year showed an increase of 75 per cent. over the corresponding months of last year," is the statement of the secretary of the concern. The wholesale end of the business is growing rapidly.

The firm is pushing Logan (Miller vein) steam coal and Wilkesbarre anthracite. The sale of supplies, such as cement, lime, brick, flue linings, fire clay, patent plaster, hydrated lime, hair and Akron pipe, is becoming a substantial part of the company's business.

For the convenience of their patrons, the general office of the company has recently been moved from Southgate Street to 570 Main Street. The new quarters are designed and equipped to give every facility for easy and rapid handling of orders and accounts.

The officers of the company are: H. L. Powers, president; H. S. Powers, treasurer, and Oliver M. Wing, secretary.

A. G. Guy Company

A new firm is the A. G. Guy Company, 102 Commercial Street, oils and lubricants. Albert G. Guy, the sole owner, has been for several years in the employ of the White & Bagley Company, and at the time of his resignation had charge of the purchase and testing of oils in the automobile department.

His salesroom and factory will be at above address with storage room elsewhere. He will handle a line of automobile oils and lubricants of high quality, and in addition will make a cutting compound for which he makes strong claims of unusual merit. Besides auto oils, he will have in stock a general line of lubricating oils.

Office of F. E. Powers Co.

Gates Park

Differing in many respects from any other real estate development in Worcester, Gates Park, opened three years ago by Bert H. Prior, a real estate agent with offices at 476 Main Street, is peculiarly a place of homes in the best sense of that much-enduring word.

It is located on the east side of Pleasant Street in that portion of Tatnuck nearest the city proper. The charms of this tract, where has been retained all that was possible of nature in one of her most attractive aspects, have enticed here a colony of refined people who have built many artistic bungalows and cottages. The illustrations herewith of the homes of I. E. Sawyer and Melville F. Heath show the character of the dwellings that line Chestnut and Walnut Avenues and Kendall Road, the three streets which give access to the 121 lots into which the land was originally divided.

Three-quarters of these lots have been sold, and in every instance the houses now erected are owned by their occupants. City water, gas, electric lights and telephones are reminders that these domiciles, tucked away under the shadows of the many trees that here abound, are truly a part of a progressive city, for everywhere the views are of the open country; a wide-expanding survey of rolling green pastures, heavily wooded hills and scattered dwellings.

Residence of I. E. Sawyer

Residence of Melville F. Heath

Close by is the only evidence of village life, where the new Tatnuck school and its attendant knot of houses form an agreeable break in the universal green of the landscape. So, too, the glimpse of blue in Thatcher's Pond adds its bit to this pleasing prospect.

Winding its way to the northward, a ribbon of road carries the eye to the village of Paxton. In the middle distance is seen the club-house and golf links of the Tatnuck Country Club. To the left, forest-crowned Rattlesnake Hill, the highest point of land in Worcester, shuts off the western view.

At the junction of Chestnut and Walnut Avenues is reserved a natural park containing two fine springs. In this park is a grove of well-grown trees that enhance the other enticing features of this unusual adjunct to a privately-owned residential section. Kendall Road, which traverses the elevated portion of this property, is now under construction and will open up some of the best lots.

Chestnut Avenue (Gates Park)

AMERICAN SASH TRIMMER

American Sash Trimmer

One machine made by the Heald Machine Company which is rapidly making its way into wood-working plants everywhere, is the American sash trimmer. This machine, covered by broad patents, is claimed by its makers to effect a saving of 75 per cent. over old methods of making sash.

It is operated by foot power and requires but little floor space. The base is a rigid iron column and supports a face plate, which carries swinging tables that can be clamped at any desired angle in relation to the cutters by hand wheels at the back of the plate. An improved feature of the later machines enables the operator to change the tables to a different angle and afterward return to the first position without resetting. This improvement adds to the rapidity with which work can be turned out without impairing the accuracy. Bed pieces of hard wood on these tables are grooved to fit the sash bar and prevent, so the manufacturers assert, any splintering of the work when cutting at any angle. Two special stops are provided to support curved pieces at exactly the right angle to make perfect joints.

Some other special features claimed for this machine relate to the cutter head, foot treadle and cutters. The cutter head is accurately machined and is adjustable for wear. A device on the treadle enables the operator to obtain double the leverage if desired. The cutters in the early machines were straight and were mounted vertically. It was found that these were apt to bind on long cuts and new cutters were designed which set at an angle and have the formed portion at the lower ends only. For these the claim is made that they give proper cutting clearance at all times, can be sharpened without changing their form and will wear for years. Plain mitering knives are furnished if desired.

Two attachments are made to be used with this machine: one, an improved mitre box which can be attached to machine or bench; the other, a mortising attachment which can be used in place of the cutter head.

Hunt Metal Corner Company

A new convenience for use in moving heavy loads about factory or store floors is the Hunt truck, made by the Hunt Metal Corner Company of Westboro. It is made wholly of steel and the wheels and casters have roller bearings. This business also makes metal corners for plaster work. These are made in a variety of forms and are meeting with a large sale. Metal beads for wainscoting, moulding and a variety of other purposes are made here.

Hunt metal corners and spacers for reinforcing rods are largely used in concrete construction. Frequent inquiries from builders here and abroad who find Hunt specialties included in the architects' specifications denote the standing of the company's products.

The Sherardizing process of galvanizing is a salient feature of all their output, and their reputation for excellence in this work is bringing them unsolicited contracts from manufacturers who desire the best rust-proof material yet devised that can be produced with economy.

Many new ideas are constantly being worked out at this factory, one of the latest being a unique form of turnbuckle for tightening the wire stays of aeroplanes.

An original and interesting line of special machines enables the company to market their devices at prices so economical that the business is growing by leaps and bounds.

Clearview

This ten-acre tract of land on Burncoat Street is fast being built up with the fine residences of some of our prosperous citizens. Clearview Avenue, a modern residential street with shade trees and granolithic walks, affords a pleasing entrance to the fifty-four large lots into which the property has been divided. All the conveniences that a big city can furnish have been provided. Joseph K. Greene, the owner, opened this tract in May, 1909, and since that time has disposed of more than half the lots.

Harold L. Gulick, traffic manager of the Norton Grinding Company, is building here, as is also John B. Morse, superintendent of the South Works of the American Steel & Wire Company.

The view from the highest point of Clearview Avenue towards the north and east includes a territory extending from Shrewsbury to Paxton. On the east, Shrewsbury hill, surmounted by a tall, white church-spire overtopping a group of shade trees through which peep the roofs of the houses in this pretty village, dominates the hills about Lake Quinsigamond. Hill upon hill marks the northern horizon, terminating with Rattlesnake Hill in the northwest. Near by on Burncoat Street are many fine residences. In the immediate foreground is Odd Fellows' Home. A little to the left appears the beginning of Greendale with its numerous industrial plants. Still farther to the left the whole extent of Indian Lake appears, backed by a series of wooded hills extending into Paxton.

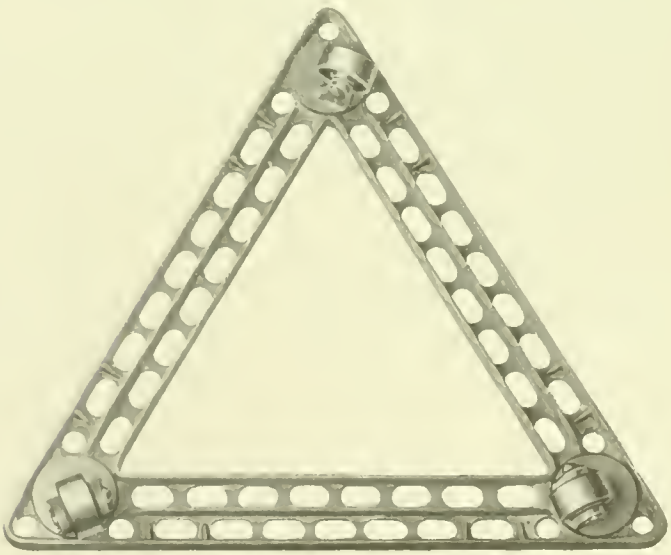
Turning to the south, a large portion of the city is seen, just enough distant to appear at its best.

The Barber's Crossing line of electric cars renders this section easy of access.

Burncoat is fast becoming a street of beautiful residences, and the restrictions at Clearview are of a character intended to maintain the high standard set by its neighbors.

Pehr G. Holmes

Pehr G. Holmes, for fifteen years in the employ of A. B. Brunell as electrotyper and foreman, has purchased the electrotype plant of A. Mugford, Inc. The business is conducted at 19 Church Street, and was established fifteen years ago by W. A. Healey, becoming a part of the Mugford business six years ago. Long experience and natural skill promise success to Mr. Holmes in his new venture. He states that he uses a special metal and that this, with careful backing and attention to the numerous details that are so important in the products of this widely used but little known art, makes all his "electros" clear and brilliant. One example of his workmanship in this issue attests the truth of his assertion. He employs several skilled assistants. Mr. Holmes is a member of the City Council, representing Ward 6.



THE HUNT TRUCK

B. F. Marsh

Lincoln Realty Company

The Lincoln Realty Company of 311 Main Street is a concern doing a general real estate business. It is pushing the sale of home sites at Green Hill, an elevated tract of land on Lincoln Street adjoining Green Hill Park. The special aim of the company is to attract here home builders of moderate means, who desire to locate in an excellent suburban residential section without being obliged to assume a heavy burden of first cost.

The development of the property has been along modern lines. Several streets have been opened up and along some of these every lot has been sold. The streets are of accepted city grade with granolithic walks and gutters, and city conveniences are being extended over the tract as fast as required by the erection of buildings. The prospectus issued by the company recites numerous advantages of location, emphasizing particularly the beauty of the park which almost surrounds the property and the attractiveness of the view to the east and north. The Quinsigamond valley, the Shrewsbury hills, Wachusett and Monadnock are some of the points included in the fair scene stretched before the eyes of the observer.

The policy of the company is liberal and the lines of their endeavor commendable. The enterprise is conducted by local men, and every inducement consistent with conservative business procedure is offered to lead the rent-payers of the city to become home-owners.

The location on Lincoln Street just beyond Green Hill Park gives one, at the present time, an impression of country life, for the city, although only fifteen minutes distant, is rendered seemingly far away by the interposition of the park with its hundreds of acres.

The property has been open for two years and is sold under restrictions to prevent the erection of crowded tenement blocks.

A. E. Hayer

The 1st of July marked the twenty-fifth anniversary of the foundation of the carriage business of A. E. Hayer, 548 Park Avenue The business has been at the present location for ten years, having been moved here from Webster Square, where it was started fifteen years previously.

Mr. Hayer is prepared to do any kind of carriage or wagon building or repair work, automobile and carriage painting and blacksmithing. The plant now contains 16,060 feet of floor space, and an addition is being built. From twelve to twenty men are constantly employed.

B. F. Marsh

When in the early 80's, B. F. Marsh, 22 Garden Street, left the farm and began a regular business of drawing sand, the first step was taken in the building up of what is now a large masons' and builders' supply house.

The unusual trade mark which characterizes all the literature and advertising of the business, has at the top the figures 150. "That's what I had when I started," said Mr. Marsh, "just one hundred and fifty dollars." This trade mark was designed by Ralph H. Whitney, who is credited by the owner with being an important factor in increasing the volume of business in the last three years. Mr. Whitney has charge of the selling end of the business and assists in the management of every department.

Mr. Marsh's first venture was the purchase of a carload of lime. From this the business has expanded till now regular supplies are carried in large variety and many special fittings and materials. The system of storing stock of such a varied character as this, which requires a thorough study of the needs and demands of the trade, has been well solved in this establishment. A plan of the storehouses, kept in the office, enables employees to find articles rarely called for without waste of time

Some of the more important specialties sold by Mr. Marsh are hard plasters, Sackett plaster board, face brick and fire tiles. Many forms of fire tiles are carried in stock that are specially designed to meet the needs of various local factories.

The first contracts made by the city for Akron pipe and Portland cement were with Mr. Marsh. He also was a pioneer in the sale of hard mortars in New England.

His business extends over all of Worcester County, and he is the sole agent for several representative companies which make building supplies.

He states that the long-pursued policy of maintaining a high standard of materials irrespective of cost, of keeping in advance of the demand and advising his customers of the introduction and advantages of new supplies, has been one of the effective causes of the fine showing of recent years. To this he added, "The business has doubled within three years."

A great economy in handling the stock has been effected by the installation of a Mathews gravity carrier for loading and unloading. As an example of the saving made by this machine, Mr. Marsh quotes a reduction from $1.06 to 28 cents per thousand in handling fire brick. With its aid three men can accomplish as much as did twelve men formerly.

The office and storehouses are located on land leased from the Boston & Maine Railroad, and the shipping facilities are excellent.

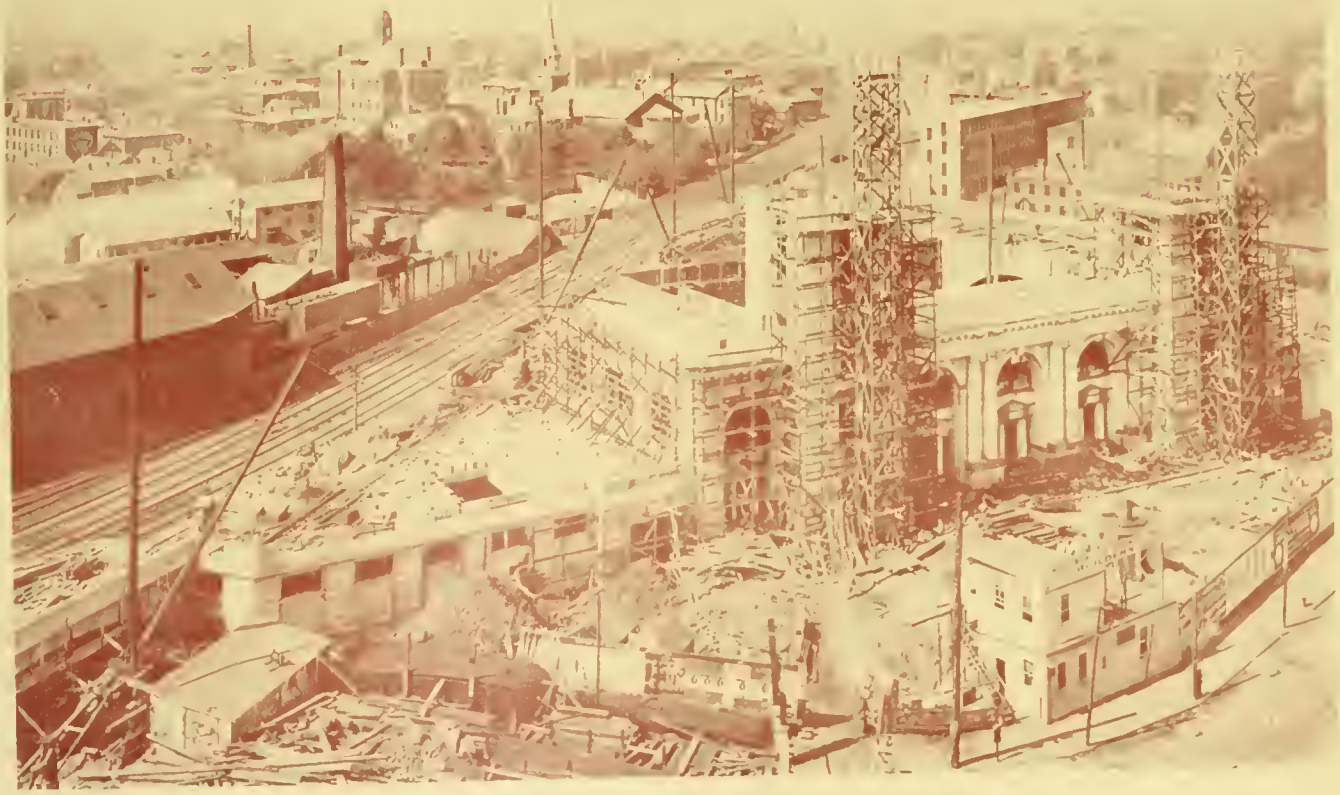
National Natural Flavors Company

A new, interesting and hustling industry in this city is the National Natural Flavors Company, 6 Barton Place, of which John W. Knibbs and E. D. Houston are the owners. They are placing on the market "the onion civilized" in the form of onion salt. Although this product has only been sold for two months, calls are coming in for it from all parts of New England, and the future looks promising for this new seasoning. The Daniels, Cornell Company of this city are the wholesale agents.

Office of B. F. Marsh

The WORCESTER MAGAZINE Illustrated

AUG 14 1911



PRESENT CONDITION OF UNION STATION

AUGUST, 1910

$1.50 per year

Published by the Worcester Board of Trade
WORCESTER, MASS., U. S. A.

15 cents the copy

Central Supply Company

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

A visit to our warerooms will repay any intending purchaser

Telephone 4440

Foster, Commercial and Mercantile Streets Worcester, Mass.

TRADE H&R ARMS CO. MARK

Established 1871 — Incorporated 1888

H&R ARMS Co

Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. AUGUST, 1910 No. 8

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Charles H. Bosworth, Advertising Manager.

CONTENTS

A COMMERCIAL PILGRIMAGE—The Coming Visit of the Houston Real Estate Exchange to Worcester, 213-216

CORN—THE BASIS OF OUR CEREAL WEALTH—Address Delivered by Prof. P. G. Holden at Chicago, 217-220

WHAT SAN ANTONIO IS DOING—A Pioneer Town and its Development—By Geo. A. Schreiner, 221-223

NEW YORK'S PUBLIC SERVICE COMMISSION—An Editorial Interview Concerning the Regulation of Public Service Corporations, 224-227

NATURE'S DEBT PAID—Death Claims Three Members of this Board, 228-229

THE NEW ENGLAND FAIR, 230

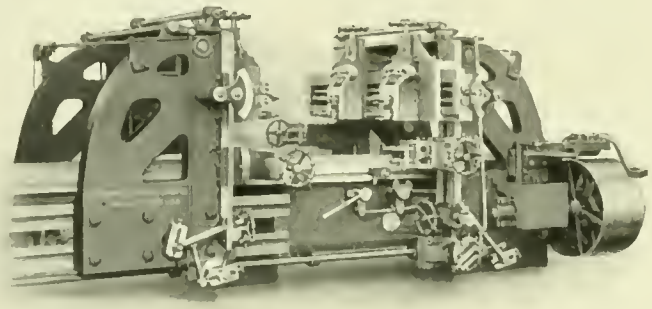
EDITORIAL REFLECTIONS, 231-233
- In Picking Out a Site What Should Appeal to a New Industry?
- The Gentleman from Texas.
- Taking Account of Stock.
- A Truly Augustan Month.

DEPARTMENTS, 234-235

BOARD OF TRADE COMMENT, 236-238

INDUSTRIAL NOTES, 239-246

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

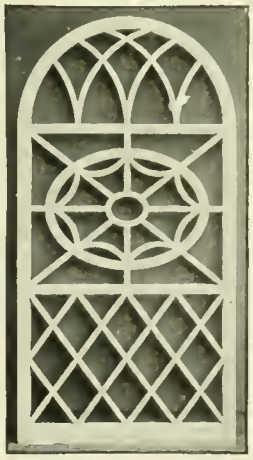
Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden-A 3, Germany and Austria.

Does Five Times as Much Work as Could be Done in the Old Way.



The Heald Machine Co., Worcester, Mass.

Gentlemen: We have been using one of your "American Sash Trimmers" constantly for the last two and a half years, and are perfectly satisfied with its work.

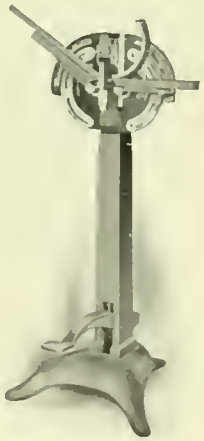
It is a great labor saver, doing five times as much work as could be done in the old way, and doing it cleaner and better.

Yours very truly, Mohawk Valley Lbr. Co., Fultonville, N. Y.

The letter only tells of entire satisfaction. It would take pages to tell of the many details of satisfaction this machine offers.

A 30 Days' Free Trial

brings out all of these points. Just send us sample of your sash bar. We'll make up a set of special cutters and bed pieces to match. The machine will then be shipped you for thirty days' trial—no strings attached. All we ask is an opportunity to show you.



Heald Machine Co. Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Here's your chance to try the

Coates Flexible Shaft

Opportunity is knocking now at the door of your shop.

With a **COATES** Outfit you can do the work right in position. The Coates is the flexible shaft that transmits full power forward or backward.

Save time, money and trouble on such work as **Drilling, Grinding** or **Polishing.** You're going to unnecessary expense when you tear down the machine and cart the pieces to the drill press or lathe.

Get our Bulletin W.

COATES CLIPPER MFG. CO.
Worcester, Mass.

HOWARD-WESSON-CO.

4 WALNUT STREET
WORCESTER

Successors to the
ART and HALF-TONE
Departments of
WOODBURY & CO.

ORIGINAL DESIGNS and Ideas for Advertising

HALF-TONE ENGRAVING Duotones 3 and 4 color plates

PHOTOGRAPHS of MACHINES, VIEWS and Manufactured products

UNSOLICITED TESTIMONIALS
From Leading Publishers, Printers, Advertising Men and Manufacturers Prove that the Designs and Engravings made by

HOWARD-WESSON-COMPANY

are original and attractive with right Printing Qualities and excellent selling values.

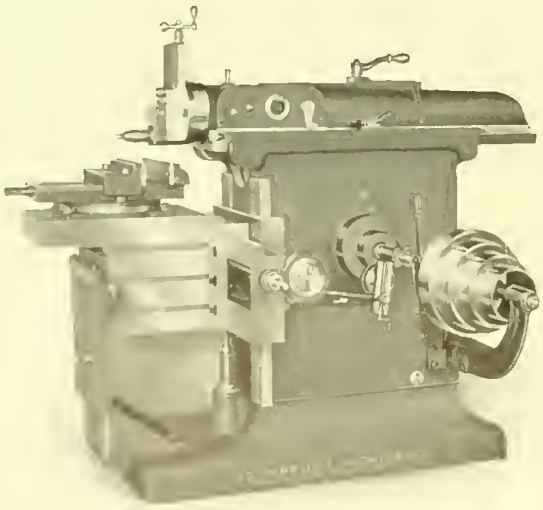
May we interest you in new designs and engravings?

MADE IN WORCESTER HOWARD WESSON CO.

Always at your service
Telephones
2670-2671

STOCKBRIDGE SHAPERS

MADE IN WORCESTER



24" STOCKBRIDGE SHAPER

Worcester made tools are recognized the world over as unexcelled in workmanship. Stockbridge Shapers combine good workmanship with SPECIAL FEATURES in construction, our patented Two-Piece Crank Motion producing economies in operation that no prospective purchaser of a shaper can afford to overlook.

STOCKBRIDGE MACHINE CO.
Worcester, Mass., U. S. A.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

The WORCESTER MAGAZINE

A Commercial Pilgrimage

To Impress Upon the North and East the Growing Importance and Future Opportunity of Houston, its Real Estate Exchange Visits Worcester in its Midsummer Tour of the Country

MINOR STEWART
President

A FRIENDLY invasion of Worcester by the Houston Real Estate Exchange booked to occur in August, brings to the front the "why" with which we Yankees greet all little-understood movements. Houston intends that the North and East shall have a clearer idea of her attractions and advantages than mere literature can give, and on this tour sends many of her leading citizens and samples of the products of the great country of which she is the trade centre. Two objects every such trip undoubtedly has: to impart information of the city and its future; to gain knowledge of the features of other municipalities that can be incorporated into the home city to its benefit.

Mr. A. S. Daugherty, a member of the Exchange, thus expresses the objects of the Houston party:

"We believe the leading thoughts that the real estate men of Houston should present to the people of the North and East, impress upon them, and get them to weigh and act upon, are:

"First, that the time has arrived in the history of this country when, to maintain our past growth and prosperity, we must produce and sell more products in foreign markets.

"Second, that from north to south is the natural line of commerce.

"Third, that nature is the greatest freighter on earth. That she gathers up all of the surplus water that falls west of the Appalachian Mountains, and east of the Rockies, and carrying it on the line of least resistance deposits it in the Gulf.

"Fourth, that this is the natural route for all of the products of soil, mine, forest and factory to follow to the world's markets.

"Fifth, that freight rates are the greatest factor in giving route to commerce.

"Sixth, that following the drainage of the country to the Gulf, railways can be built at about one-half the cost of building them east and west, at right angles to the drainage, where numerous large creeks and immense rivers must be bridged, hills cut down and mountains tunneled. That the railways to the Gulf, built at about one-half the cost of the east and west lines, can afford to handle traffic at much less cost to the producers.

"Seventh, that forty-one per cent. of the total continental part of the United States is nearer to Houston than to any other port of the country, and Houston is reached by a down-hill pull.

"Eighth, that the commerce of the twenty Latin-American republics, with their 9,000,000 square miles of territory, and their 70,000,000 population, living under governments patterned after ours, and owing

FIRST NATIONAL BANK BUILDING

A Bird's-Eye View

their existence to us, are our most available foreign markets.

"Ninth, that Houston is the nearest point in the United States to these peoples, that, being a railway centre, with deep water and high, well-drained lands upon which the people of the United States can locate

Houston Launch Club

their factories, foundries and work-shops, and concentrate their resources, Houston is the logical point from which to command the commerce of these republics.

"Tenth, that the time is rapidly approaching when the United States will be pitted against the rest of the progressive nations of the earth to maintain her commercial supremacy. That in the future location of our factories, foundries and work-shops, we as a people owe it to ourselves to select the strategic points from which to command the trade we seek to control. That when we locate our sons and daughters, we owe it to them to place them in the strongest possible position to meet competition.

"Eleventh, that every day in the year Houston is an open port, waving its banner to the commerce of the earth, and bidding it come on.

"Twelfth, that Houston is of the land of the vegetable, of the orange and the fig, of rice, of cotton and of sugar—the climate in which historic civilization was founded and civilized man has reached the highest degree of perfection.

"Thirteenth, that now is the time for the young, courageous, industrious, economical and temperate of all sections to cast their lot with Houston. That in Houston will dwell demand for muscle, brawn, inventive genius, mechanical skill, financial capacity, ex-

Houston, Texas

centive power, and the inherent excellencies that crown success.

"Fourteenth, that in Houston there is now an enlightened progressive citizenship, which extends a cordial invitation to kindred spirits throughout the country to come and locate here and participate in her advantages. To join with them in making of Houston one of the mighty marts of the earth. And to aid in making and maintaining her citizens a part of its vanguard.

"To this let me simply add that impressing these thoughts at long range or single-handed is too slow a method for this day and generation. We have, therefore, arranged our advertising excursion in order that our men may meet your men in a body and emphasize these vital truths, and thus interest a larger number of your constituents in coming to see for themselves the advantages that Houston offers."

In the words of another writer: "They expect to show that Houston is destined to be the leading commercial and industrial centre of the Southwest, and to convey some idea of the numerous opportunities to be found here for the man of means, ambition and business ability, and to extend a cordial invitation to live people to join in the game of building up a great commercial centre and to share the benefits in so doing."

The tentative itinerary of the tour includes the following places: St. Louis, Mattoon, Terre Haute, Indianapolis, Cincinnati, Dayton, Springfield, Columbus, Pittsburg, Altoona, Harrisburg, Washington, Baltimore, Philadelphia, New York, Boston, Worcester, Springfield, Albany, Syracuse, Rochester, Buffalo, Lewiston, Toronto, Niagara Falls, Cleveland, Sandusky, Toledo, Chicago, Moline, Rock Island, Davenport, Quincy, Hannibal, Kansas City, Topeka, Wichita, Oklahoma City and Fort Worth.

Turning Basin No. 1 of Ship Channel

George M. Woodward
Secretary

Following is a partial list of the members of the touring party: Hon. H. B. Rice, Mayor of Houston; Minor Stewart, lawyer, president of the Houston Title Guarantee Company, Houston Abstract Company and Houston Real Estate Exchange; Dr. A. A. Luther, real estate dealer, president Southwestern Land Dev. Company; C. Glenn Nichols, real estate dealer, member of C. A. Elmen & Company; C. S. Woods, president of the Western Land Corporation; F. P. Eastburn, with L. Bryan & Company; George M. Woodward, secretary of the Houston Real Estate Exchange; J. A. Stephens, with T. O. M. Land Company; J. S. Daugherty, real estate dealer; Rev. Wm. States Jacob, pastor of the First Presbyterian Church; W. H. Gaines, real estate dealer; Jesse H. Jones, capitalist; A. C. Hall, real estate investments; C. F. Winkler, real estate dealer; W. A. McNeill; W. G. Love, lawyer; L. H. Dunn, H. H. Peden; John Henry Kirby, capitalist; J. H. McCracken, C. A. Elmen & Company; Clyde C. Buckingham, editor of Texas Realty Journal; Leonard W. Craig, real estate dealer; J. D. Staples, real estate dealer; A. F. Sundermeyer, real estate dealer; E. E. Reed, real estate dealer; David Daly, manager of Houston Electric Company; J. H. Eagle, attorney; Matt T. Dorsett, plumber; C. J. Wildman Palacios Board of Trade; H. Masterson, attorney; H. T. D. Wilson, ranchman and auto dealer; Dr. J. J. Colwell, physician; N. Sones; A. E. Pleak of Rosenberg, land dealer; Adolph Boldt, secretary Houston Business League; Dr. Harlan Trask, physician; George N. Torrey, of Torrey & Company, insurance agents; A. C. Swanson, real estate dealer; Paul Bauer, Paul Bauer Company; W. G. Mashburn, with American Multigraph Sales Company; George M. Bailey, associate editor Houston Daily Post; L. C. Clippinger, real estate dealer; J. O. Ross, capitalist; C. W. Hahl, land dealer; Thomas A. Scott, real estate dealer; Theo. Werner, merchant; Mr. Tabor; F. W. McNeir; George L. Teat; Mr. Rogers, proprietor Capital Hotel; E. M. Sawtell, South Houston; J. D. Freeman, Lovelady, Texas.

A Houston Home

Loading Cotton

Commercial Clubs in the South

The census of commercial bodies in the southern states, just completed by the Southern Commercial Congress, shows 1598 organizations. This is a gain of 373 in the last year.

The salaries paid to commercial secretaries who give their whole time to promotion has shown improvement during the year. There are now many who get over $1800 a year, some over $2400, a few over $3000 and a small number over $5000. The highest-priced men are found in the towns that are doing most, and in which advertising funds are now being brought together for the continuous promotion campaign of the South, which will begin in the fall of 1910. Several hundred secretaries are doing great work in small towns, serving without salaries; among these a Presbyterian minister, an undertaker and a theatrical manager.

The training of secretaries has been along every line of experience. Newspaper men lead, with merchants as a close second.

CORN The Basis of Our Cereal Wealth

FOR the benefit of its readers who are interested in the agricultural development of New England, and who realize what an important role corn plays in our welfare as a nation, the Worcester Magazine republishes herewith the address recently delivered at the Agricultural Publishers' dinner in Chicago by Prof. P. G. Holden of Iowa, the Corn King. Professor Holden is thoroughly acquainted with his subject, and talks about it as entertainingly as W. H. H. Murray used to tell trapping stories. The officers of the New England Corn Exposition are expecting that Professor Holden will be one of the dominant figures of the Exposition when it is held in this city, November 7-12.—*Editorial Note.*

Worthy Toastmaster, Agricultural Advertisers, and Gentlemen:

I wish that I might say something this evening that would be of value and help, and of real worth to this nation—to the farmers, and to reach them through you. There is great work for all of us. I am not much given to going over the past, although I expect to say a few words regarding past conditions in agriculture, but I notice in your splendid little souvenir, which has been issued, that this question has been taken up quite completely. It is therefore needless for me to go into the history of the development, for you people, perhaps better than any one else in the United States, know of the tremendous advancements that have been made in all lines of agriculture during the last twenty years.

It was only a few years ago, I remember very distinctly as I went out to a farmers' meeting, that it was impossible for me to get through a single meeting without somebody enquiring as to what was the best time to plant potatoes; that is, what time of the moon would be the best to plant potatoes; what time would be best to sow the wheat, and so forth, and one man was kind enough to go home seven miles one night to get a recipe showing that sometime in August was the time that weeds should be cut, in order to kill them. He went home, however, and got it, and of course I thanked him for his courtesy. You may go throughout the length and breadth of the United States, and will hardly hear a question of that kind now. You will hear no farmer asking now whether the wheat turns to smut and chaff, and a few years ago you would possibly have to fight with them because they thought they knew. Prejudice ruled, but today you can go throughout the length and breadth of this land, and you will find that there are no people that stand so ready to listen to the teachings of anybody; there are no people that I would rather meet and try and impress upon them the need of improvements than the farmers, and I think you people will agree with me on that.

It is often said, I hear it often yet, the reflections of the past of the hayseed and the cartoons we used to see in the papers. These things now are past, and we have come to have a wholesome respect for this man, this tiller of the soil. I want to stop here for a moment to ask you people to raise your hands for my benefit. All of those of you who have been connected primarily with agricultural work on the farm, raise your hand. (Nearly all the assemblage did so.)

Thank you very much; and you know something of the method and of the way of living, and of the things that the boy had to endure on those farms, in those times, as I know them very well. But now you will find that the boys are leaving other occupations and are turning towards agriculture and toward the farm. I have been recently offering good salaries to a number of young men to take up work in the agricultural extension work in Iowa, and they look at me and say, "Mr. Holden, I can earn more on the farm." The farm is not what it used to be, and some of the boys and men are going back on the farm, and are putting their heads into the business. This is being done everywhere. It is one of the most remarkable improvements of the age. I am not going to dwell on that very much, but I do want to point out a few of the tremendous improvements now at hand, and in which you must take part if we are to achieve greatness, as we all ought to.

It must be borne in mind that much has been given to the people of the United States, and especially of this great central West, and much is demanded of us, and yet oftentimes I think we do not often realize the tremendous responsibility that devolves upon us, and now is the most critical time in the history of American agriculture.

No efforts will ever mean so much as now in the way of improvements; in the way of enrichment of homes, and the making of them better, which is being accomplished today by the missionary work that is being done along the line of better living. People are looking for better things; looking for advancement, and ready for it; listening and waiting eagerly for it. As a matter of fact, as the customs and principles and methods are fixed during the next fifty years, so they will be for the next thousand years in this United States. The dairy communities to-day will be dairy communities one hundred years from now, and that is the trend of the thought and impulses of our people today. The time is passing rapidly when our people in the cities will support the farmers, and the farmers will support the people in the cities in maintaining carnivals and street affairs; they are demanding now better things; they are demand-

ing short courses all over the State; they are demanding education, they are demanding schools, they are demanding trains, and are placing on them schools for the people to come to, and you would wonder at the number in Iowa alone of men of affairs who have said, "Mr. Holden, if you come and give us some of these things, we will give up horse racing." That is a pretty hard thing for some of them to do, and yet some of these people are paying for debts contracted by horse racing in the State of Iowa. They have caught a bigger spirit, and want better things, and are demanding better things. And remember this: that the highest type of people on the face of the earth is the farmer and the farmer boys growing up there in their purity, and right here in the great city of Chicago an inventory was taken of the most needed men in this community, and do you know eighty-three per cent of those men came out of the grass, as you say. (Applause.) And the farmers are now, as I say, looking for better things.

I wish you could have been this last week on the corn train with us as we went over two thousand miles of the Milwaukee tracks through Iowa, and see how the people collected and eagerly came into the trains. They did not come to criticise; they just came for things to help them in the future. I say there are great things to be undertaken yet, and the agricultural press in this country, in my estimation, is the most potent factor for bringing about those changes. I sometimes wonder if our agricultural press had taken into consideration sufficiently the human element in the farmer's life. It has been heretofore too much of a trade journal proposition. They have not recognized the man in him enough, his sympathies, and the moral side of this agricultural business. There is a great big field there, and I want to say to you that the next twenty years are going to see wonderful changes. There are going to be short-course schools taken out to the people in every community in Iowa, where some of the people got this idea from this corn train that stopped but for a few minutes. They said, "We want this longer; we want it for a week," and so we have held now over sixty short courses in these different towns, and they have paid us their two and a half and three dollars for a ticket for a week, costing that little town of from a thousand to fifteen hundred, sometimes seven thousand dollars for one short course, and sometimes we get as many people as I see gathered here before me tonight. They stay there for a week learning about their corn, and they bring their women with their domestic science, and they study these things. That would not have been possible a few years ago. They would have laughed at it. The idea of teaching us how to grow corn? You hardly hear anything of that kind now. I remember six or seven years ago, I went to Iowa, and I went out early to where I was going to lecture. I got out there about daylight, and I saw a man fixing up his wagon. I went into the yard and we talked a little while, and finally his wife called us to breakfast. I was talking to him. She came out again and said, "John, won't you come to breakfast?" I still kept talking to him. I hadn't been to breakfast yet that morning. Finally, he didn't ask me my name, but he said, "Say, have you been to breakfast yet this morning?" I said no. He said, "Come and have breakfast with me." That morning while at breakfast I asked him, "Are you going to the Institute to-day to hear the lecture on corn?" He said he reckoned he knew more about corn than that fellow ever knew. "By the way," he said, "what's your name?" "Mr. Holden," I said. He said, "You ain't the fellow that is going to talk corn, are you?" "Yes," I said, "I was going to talk corn a little." He apologized for his statement. He didn't think I was the fellow that was going to talk. That sort of sentiment was all gone, however, and he was mighty glad to go with me a little later. I promised never to give him away if he went into a cornfield with me, and he did so, and we spent an hour studying that corn on that agreement that I would not give him away, and I never did, and when we got through we found there was less than half of the stand of corn in the field of eighty acres, and twenty per cent. of the stalks barren. Oh, somebody says, somebody has had trouble with the seed. Oh, no, never had any trouble. He didn't have trouble because he hadn't taken any trouble with it to begin with, and finally he walked along up to the gate, and when I was about to shake hands with him and thank him for my good breakfast, he put his hand on my shoulder and said, "Mr. Holden, wait a minute. Do you know, I never thought of this matter that way before," and he stretched his hands to the field as though reviewing history and he said, "Mr. Holden, whenever my two boys and myself went into this corn to plow and cultivate and fit the ground, we put half of every day's labor on land that didn't produce;" and I found out later down at the grocery store that he had a mortgage on the farm, and kept his two boys out of school all summer to cultivate corn, and I knew what was the matter, and that is he and his boys had spent half their time on land that was not producing anything; and there is a great deal of that, and when you sum it all up, it amounts to this: intelligence is the measure of production, and there is no way of getting around that.

Prof. P. G. Holden

But there is great danger in this great rich central West that we shall not live up to our possibilities. You know the great prairies of Europe; the people there have simply sat down and eaten and been contented; they have not moved the world. It has been the people that came from the hills, the Germans and the Swedes, and the French, English, Scotch and Irish. Those are the people that have made America. The people that do the digging work for a living. Now the question is, shall we be satisfied?

I want to say to you that while we are proud of the

past, we are so prone to talk of the things done, instead of the things yet to be done, and to sit down and be contented. Self-conceited satisfaction is more dangerous in the history of a nation, or the life of a person, than anything else, and we have to guard against that. We must set our faces to the future for a thousand years, and live as though we meant to live a thousand years. This agricultural teaching will come into the schools, and it will develop the right kind of pride in the boys and girls.

Our boys have got to grow up to love their work on these farms, and that feeling has got to come through the literature that goes into their homes, and no literature that goes into their homes is so much read and re-read as the agricultural papers are, and you will agree with me that that is true. These papers are not thrown into the fire. They are laid away. They are the papers in our homes today, and they are read and re-read. Put in your best articles. As I say, I think we should look for a little higher standard. Take up the problems that are coming, and discuss them, and I think you will find that these course schools will spread all over the land. I think they will.

I want to illustrate one or two things brought out by the county stations. We must get them near home. And I am going to ask you to pardon me for just referring a few minutes to some of our experiments. Just to illustrate: If I owned the farms of a single county, one of the ninety-nine counties in the State of Iowa, where one hundred thousand acres is put in, I would agree to increase the yield ten bushels an acre the first year, by testing each ear of corn, and by getting rid of the poor ones. One hundred thousand acres put in corn—that would mean a million dollars' increase. That would buy thousands of dollars' worth of machinery, and lots of things. That increase would go on to the market, on to the world's markets, and become a part of the commerce in a hundred different ways; that is, there would be an increase in buildings, an increase in churches, an increase in schools, and in other things, and improvements of all kinds; and there are ninety-nine counties that would give me thirty-two thousand dollars for these short-course institutes, and I would take that thirty-two thousand dollars and put it in one county and get five hundred thousand dollars in return for it.

Nearly every county has a poor-farm, and we are making it a county experiment station. The laws of Iowa provide that they can appropriate three hundred dollars for experiments. We can prepare these farms, forty-acre or thirty-acre fields, as the case may be, and get them ready for planting. We start through the county, and gather corn from every farmer in the different sections. We put his name on it. We find out whether he has tested it, and we take it to the County Poor Farm, and put three kernels in every hill, at the same time, on the same day, and we take this corn out of his own box, and plant them again and again, until every man's corn is planted in four places. I want to give you an illustration of what happened in Delaware County. Here is one man that planted fifty acres, and out of one hundred kernels ninety-six graded strong, and four weak, and that man had sixty-five bushels to the acre yield. Here is another man in the same county, that out of one hundred kernels there were eighty-four that didn't grow at all. He had been planting forty-five acres of it. Well, now, here's an illustration, an average illustration. We find this man had sixty-six bushels to the acre, under the same treatment, same cultivation, and the conditions the same, and here was another man that had thirty-four bushels to the acre, or a difference here of thirty-two bushels; over thirty bushels to the acre difference between this man and that man. This man planted seven acres: 210 bushels is worth $105, and that means that this man can afford to pay that man $100 for a bushel of his seed and still be ahead. We haven't begun to realize the value of corn.

And let us remember this: the life of the nation and the rock-bottom of all prosperity and success are what come out of this old earth. Some time there will be a law requiring every ear of corn to be planted right for the sake of humanity, because you are concerned in it, and I am concerned in it, just as much as the man that grows it, and more. We plant three kernels to the hill, and yet, if I were to throw away two of the stalks of that little hill, it would be the average yield of the State of Iowa to-day. We haven't reason to be proud of the great things that we are doing in the way of growing things.

We go to these county farms in August and September, and hold a picnic there, and that is one of the most remarkable things in our improvements. We have boys judging tests, and taking part in this educational work. I take them down to the County Farm, where this corn is planted, and there is an average of 2000 farms in the county, and we shall have from two to six thousand people at the county picnics, and we will take them down and show them each his own corn, and the other fellow's corn, all there to see.

We are going through the counties in that way. There is no way that I know of in which you can help anyone, until you can get close to him, and there must be sympathy and warm blood in it all. Cold intellectuality will never move the world very far, and that good warm-hearted spirit must go through all of our work if we are to build up the nation.

Here's Taylor County: One ear of corn. This man had a yield of eighty bushels; another twelve. Here's an ear (indicating) with one hundred shells on it. Here's (indicating) a loss of land and labor upon that ear of corn, and when you realize that there are eight or nine millions of acres in Iowa alone put in this great crop, which is the basis of our cereal wealth and life-stock, you will realize the importance of it. Today there is more corn being tested in Iowa alone than the rest of the United States. We have been keeping at it, and bringing these classes to the people. We are getting them and helping them to realize what it means. We have a method by which we get rid of some of these things, and that is by testing.

I want to call your attention to one of the splendid things that is being done today in Iowa. The Commercial Club of Des Moines has a boosters' division that is looking out not only for the interests of Des Moines primarily, but looking out for the interest of the whole State; and Des Moines never did such a splendid thing for itself as when it undertook to help the people of the whole State, and encourage the interests of the Commercial Club in the State by sending out testers to test the corn and to show the farmers the conditions that were prevailing. The Commercial Club has drafted a bill asking the Legislature to appropriate one hundred thousand dollars for this extension work, and for short courses to be held throughout the State, and the Secretary of the Commercial Club has compiled a little set

of figures which I saw the other day as I picked up the paper.

We have attending these short courses now something like five thousand people in these different communities. He wrote a letter to these short-course boys, and found out what their yield of corn was, after their taking the short courses, and testing the corn, and throwing out the poor ones. He found that the yield was sixty bushels to the acre, one and a half to each hill. He took the average from the State as being 33. A difference of increase of 30, due to the short course, which could not be attributed to anything else. Why, 30 bushels to the acre? If I had an increase of ten bushels to the acre, that would make $500,000 in one county, and multiply that by 99, and you have fifty millions of dollars. You cannot conceive of such an amount hardly, and here is 30 bushels to the acre, and it can all be used. And 63 bushels can be produced.

On oats, the short-course boys had 52 bushels. The average for the State was 27, leaving an increase of 25 bushels due to the boys studying the game, and using good seed, and getting the best seed that was to be had, and that would be worth fifty million dollars alone to the State in the increase on oats. And wheat the same way, and so on with the stock, and things of that kind. And above all, the increased interest taken. Some of these young men have come to me time after time and said, "Mr. Holden, since I have attended these short courses the farm is a new business to me. We all like it; we are interested in it, and love our work very much."

I want to say that drudgery is nothing but labor without love, and when a man begins to love his work all things come his way. That is one of the illustrations attending our work, the liking of the boys and girls and the people on the farm to be there. And another thing, these boys can do so much that is needed. Do you know that the greatest burden of this agricultural work falls on the women in those homes, the wives? And here's an extreme illustration of a woman over here in Iowa. The doctor was called. The woman was sick; the husband did not know just exactly what was the matter with the lady. When the doctor came out, he asked: "Now, doctor, what really is the matter?". He said, "Your wife is suffering from a severe case of melancholia." The man said, "I don't really know where she could have got it; she couldn't have caught it, because she hasn't been out of that kitchen for thirteen years to my knowledge." I guess that case is plainly true. But do you know in such cases as that a wonderful change has been coming. I simply insist that the school teachers and superintendents bring the girls and boys to the corn train, and that the women shall come to the institutes as well. So many requests for help have come that I can simply say to the business men: "If you close your stores in the town while I am there for two hours, I will come; bring the boys and women and have them all there." You can't do much for the older men; you must have the boys and women folks, and this has enabled us to accomplish our greatest work in Iowa.

I was down in Nashville, and there were gathered 2000 men from all over Tennessee. And in that meeting there were but three women that I could find, and that was all. I said to the President, "I want to know about this before I can go on. Who are those women?" He said. "This one and this one and this one are stenographers trying to take down your speech." I didn't get much credit out of it anyway. I said, "Do you men love your homes?" They said yes. I said, "You will agree with me that the wife is the best half of that home." "Yes, sir," they said, and hollered it all over the audience. Then I said, "The boys and girls are the other half of the home. Now who am I talking to?" (Applause.) Now, that comes pretty nearly being right. You have got to get hold of the boys and girls, and your papers can do it.

Let us stand for the best there is in all of these things as well as in the home, and I want to say, in my estimation, the advancement and progress made on the farms will come nearer mentioning the total progress in this country than in any other line of business that I know of. (Loud applause.)

A Helpful Impetus

A Rational and Well-Written Appeal to Stir up the Backsliders

The editor of the Washington (Pa.) Reporter hits the nail on the head in a well-written editorial, from which we quote a portion:

"The Board of Trade has been reorganized. Don't knock. Four hundred to five hundred memberships have been taken. This fact shows some interest. An enthusiastic meeting was held a few days ago by business men. This was another sign that there is interest.

"A year from now you will doubtless say that the present organization has done nothing. But it will have. It will keep the town moving if nothing else. It will keep it from going backward, and if a town can be prevented from standing still it will move forward. This is the experience of all towns.

"Washington needs your help and your interest. It needs your co-operation. It can only be given in a practical way through some organization. That organized effort for Washington now is the Board of Trade. It will not accomplish all that its enthusiastic promoters think it will. It will not increase business the way some want it to. It will not do many things expected of it. In a few years perhaps we may need another reorganization. But just now it is the means at hand to do the best we can. And it will do things helpful to every business of the community and if you fail to give it support you fail in your duty as a citizen. Give it a boost."

Alabama's Need of Truck Farms

The Chamber of Commerce of Birmingham, Ala., is planning a campaign of education in truck farming. With thousands of acres of land adapted for all forms of market-gardening lying idle in close proximity to Birmingham, 85 per cent. of the produce, vegetables and poultry consumed in the city is shipped in from distant points. The Tennessee Coal, Iron & Railroad Company has a large experimental truck farm at McAdory, Ala., and is demonstrating the possibilities of this particular form of agriculture.

An extensive project recently launched by the Minneapolis Commercial Club is the erection of a $3,560,000 union passenger depot.

What San Antonio is Doing

A Pioneer Town and its Development. Its Growth from a Sleepy Mission Outpost to the Focal Point of the Activities of a Territory of 60,000 Square Miles

By George A. Schreiner

FOR many years San Antonio was a sleepy little frontier town; before that it was even a little less. To the Spanish of the eighteenth century belongs the rather cute idea of mixing things political and religious. Without this San Antonio might not be on the map. In 1665 La Salle landed in Texas and thereafter the political status of the New Philippines became a real live issue between Spain and France. The famous bull of Pope Alexander, giving to Spain and Portugal all territory west of the Azores, or thereabouts, had ceased to be a factor in international politics and notions as to effective occupancy, etc., appeared for the first time as a factor in territoriality. To this circumstance San Antonio owes its founding. Hucherean St. Denis showed the Spanish where it would be well to establish a hinterland post and in 1718 the first foundations in San Antonio were laid. Missions and a *presidio* were built and in the course of time a little *villa* grew. Until the Texans wrested the country from the Mexicans, San Antonio's chief *raison d'être* was the conversion of Indians to Christianity. This, to that time, was its only business, one, too, that did not lead to any eras of prosperity or rapid development.

With the establishment of the Texas republic things took on a different aspect. Men began to take an interest in material things and a few years after the country's annexation by the United States, San Antonio had become the principal wool market in the country. Practically every man in the town was a trader and life on the road to Port Indianola was brisk. Coming and going, the prairie schooners groaned under the loads of wool that went to the coast and the merchandise that went to the interior. But the Civil War put an end to all this. San Antonio went into the hole and stayed there until ten years ago.

In the meantime, of course, its population had increased little by little. In 1835 San Antonio de Bexar had about 6000 inhabitants, while in 1865 it could boast of 10,000. Ten years ago, or in 1900, this number had grown to 53,321, and the present census, no doubt, will show that San Antonio has well passed the 100,000 mark.

This short résumé of the city's history is necessary to a proper appreciation of its condition to-day. San Antonio is not booming in the strict sense of the word. It boomed once and then collapsed, and those who saw its consequences benefited by their experience. For this reason San Antonio's present development, though rapid and generous, is of the stable kind; all the more so since it is the outcome of the development of its great tributary territory, Southwest Texas, a country of some 60,000 square miles.

Civic improvement has of late received considerable attention, and to it are due the many fine parks and plazas of which San Antonio may boast without being boastful. There is in Texas no other city that has so many fine residences or as fine a group of public buildings. The city, still somewhat behind in the matter of paved streets, is now setting a pace in this, being the owner of a first-class street paving plant, one of the first, if not the first, ever acquired municipally. Modern street sweeping machines have been acquired and an effective sewerage system guards the health of the citizens.

Educationally, San Antonio has for many years occupied a very enviable position, being regarded to-day as one of the centers of learning and culture in all Texas. The city's scholastic population is drawn from every state in the Union, and in Mexico San Antonio is looked upon as the only place where a thorough American education may be acquired. In addition to thirty-two public schools and a very fine high school, the city has over thirty private educational institutions, among them a number of military academies and a few that are of a parochial character.

As mentioned before, San Antonio owes its development principally to the growth of its territory, but that growth to a very large extent was induced by the city. To settle up the "San Antonio country" has been the chief aim of the city's publicity work. Instead of going after a factory or two, San Antonio is taking the view that with the country well settled up, factories will come on their own accord or with less coaxing than would be required otherwise. And its field in this respect is not small by any means. There are thirty-seven counties in the San Antonio country, and in them are waiting for the plow no less than 29,061,667 acres of fertile land. In this tremendous territory only 3,282,767 acres are now cultivated, being less than 11.13 per cent. of a total of 32,344,434 acres. With these broad fields in crops San Antonio will be greater than ever, for no matter how the smaller cities may thrive the big sister will always, by reason of strategical advantage, remain the leader. In Southwest Texas, as in the case of Rome, all roads lead to San Antonio.

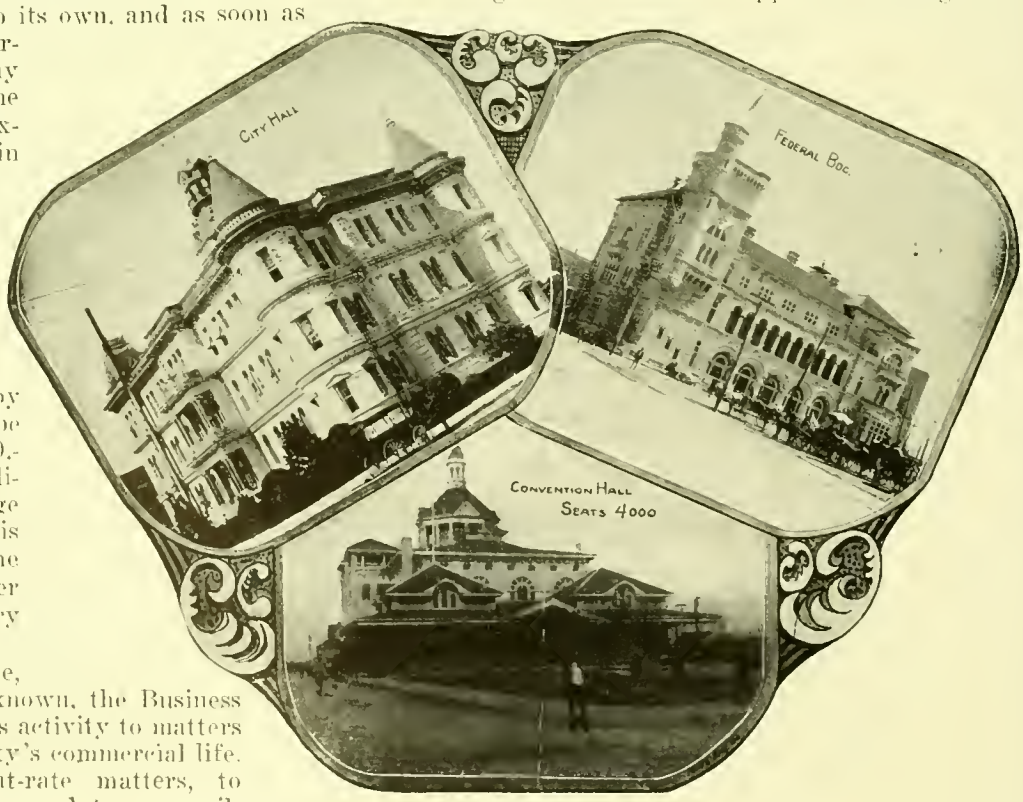
View of San Antonio

THE SOUTHERN PACIFIC DEPOT

By appealing to civic pride the leaders of thought in San Antonio have cultivated civic pride or, better, have given it a concrete form and power of expression. In this the Chamber of Commerce and its filial organization, the Publicity League, have done all. These, in their turn, were the work of the "boosters," the long-headed fellow who saw that civic pride and material well-being cannot be divorced. The original boosters were and are real estate men. There were times, indeed, when their motives were questioned. But these times are of the past. There is hardly an enterprise in the city which at its inception did not have the warm support of the real estate boosters, and time has shown that the green eyes, which saw nothing in the real estate man but the egotist, were wrong. The home-seeker coming to Southwest Texas buys real estate only once in a while, but food, clothing, implements, building materials and the decencies and luxuries of life almost every day. While it took some time to impart this truth it at last came into its own, and as soon as it did its force became overwhelming. Nobody to-day would dream of questioning the motive of the boosters par excellence, the men who deal in acres and lots. Where formerly the membership of the Chamber of Commerce could be counted by the tens, it is now counted by the hundreds, and where it was often the case that the salary of the secretary had to be made up by private subscription, it will be possible this year to spend $50,000 in publicity work in addition to maintaining a large staff of employees. All this because civic pride took the form of ambition for greater things in city and country building.

The Chamber of Commerce, or, as the organization was known, the Business Men's Club, to-day confines its activity to matters intimately related with the city's commercial life. It pays attention to freight-rate matters, to good roads, to new industries, and to new railroads. During 1909 it raised railroad bonuses amounting to $102,000, and provided funds for a number of other public affairs, amounting in all to $110,000. The San Antonio, Rio Grande & Tampico Railroad now building would still be little more than a possibility without the San Antonio Chamber of Commerce. The sum of $50,000 is still available for a road to Fredericksburg, and similar inducements are open to any great enterprise that can show that it will be a benefit to the country and city in addition to being that to itself.

To the Publicity League is left the advertising of San Antonio. This organization is a child of the Chamber of Commerce, as it were. While most members of the older body belong to the younger one, it has a membership of its own. Its affairs are controlled by a chairman and independent executive committee, of which the President and Secretary of the Chamber of Commerce are one an ex-officio and the other an appointed official. This somewhat novel arrangement precludes the possibility of crossed wires and has shown to be a great success. In addition to doing some direct advertising, the Publicity League maintains an up-to-date press bureau, from which emanate stories likely to draw attention to Southwest Texas. No press agents "stunts" are indulged in, however, and every line of copy that goes out has the merit of being newsy and, above all, true. Boosting is not attempted in the matter supplied by the press bureau, the theory being that the date line is enough. The field in which news is found by the press agent is a very large one, covering as it does a territory of about 60,000 square miles. Lots of things not "wirable" happen in so large an



PUBLIC BUILDINGS

In Breckenridge Park

area. Not only is there great material for features, but matter of a direct news value is plentiful at all times. The only kind of news with a flavor of boosting sent out is of a bona-fide development character, and for this reason acceptable.

The thing now before the "boosters" of San Antonio is more railroads, a deep-water port at Aransas Pass, and the building of a large auditorium or stadium. Proposition number one will be taken up as time and opportunity permit; the port at Aransas Pass is practically assured, and the auditorium is merely a matter of a few months. Plans and the means to raise the money for the stadium, for such will be the nature of the edifice, have already been decided on, and had it not been for a hitch in getting the site wanted for the structure, it would be building now. The stadium will be built with a view of having it serve the purposes of big assemblies of all kinds. Large conventions, circus performances, horse shows, carnivals, grand opera, baseball, and every other outdoor sport will be accommodated in it.

What San Antonio has done, and will do in the future, is all the result of civic pride. Towns, no doubt, will grow to some extent without a tangible manifestation of this, but few of them stay growing without it in the proportion that should be theirs, primary conditions considered. Civic pride is nothing else than a sort of localized patriotism. Perhaps it is not as sublimely unselfish as the idealists may want virtue to be, but what it may lack in this respect it gains in practicality, and that after all is the thing in city building that counts.

Present Conditions in Peoria

A Lively Discussion by Peoria Papers Concerning the Lack of Effective Work by the Commercial Club

"No one wants to see the Commercial Club die, the Herald-Transcript least of all.

"No one is glad because the present organization is dwindling in numbers and influence. This is a misfortune to the city. This paper, which has tried to be loyal to Peoria in every way, is as sorry for present conditions as any one.

"The time has come to get together, to stop all foolish bickerings, to give up personal ambitions and jealousies, and to revive the Commercial Club—to make it, in short, a new club.

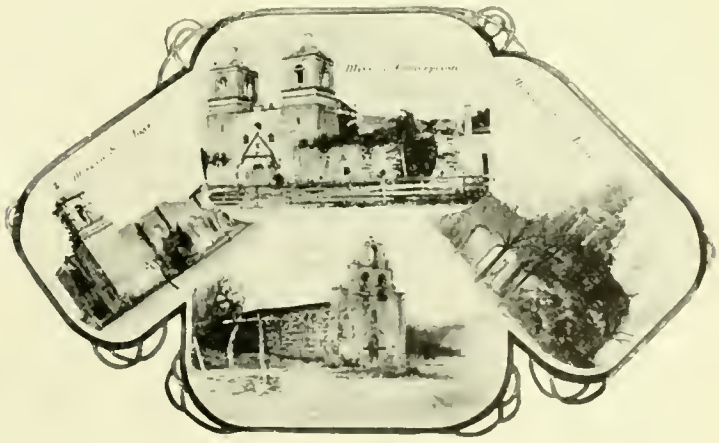
"This need not mean even the reorganization of the present club. We have enough organization as it is. It does not mean the resignation of President Grier, whom the Herald-Transcript has criticised for allowing Terminal interests to overshadow all other considerations in the club. The Herald-Transcript will gladly support the present officials and the club if it will put its activities on a broader and more effective basis.

"We have at present a Commercial Club, consisting of a president, a secretary and a few directors. There are members, of course, but their duty is merely to pay dues. The president, the directors and the secretary do the work. They do but one thing at a time. They conduct a carnival and a convention gets away from them. They chase a convention and a factory goes glimmering. They spend three months fishing for a factory and an interurban project dies for lack of support.

"In short, Peoria needs more than a single-barreled Commercial Club. It needs a club of members who are given work to do. The idea that a secretary is hired to do all the work is a mistake. He should be hired to outline, plan and help direct the work. The members themselves must work if results are to be obtained.

"The Commercial Club has suffered for lack of work. The member who gets out and works makes his own enthusiasm. Let the Commercial Club broaden out and get universally busy. When this is done, the Herald-Transcript will pledge its support."—Peoria Herald-Transcript.

"The Herald-Transcript is pounding the Commercial Club and insisting that it ought to do more work. The proprietor of the Herald-Transcript is one of the directors of the Commercial Club. He seldom attends any of the meetings, never works on committees, and shirks his duty in every way possible. This is the way he 'Let's Go Peoria.' If he wants the Commercial Club to be more efficient and to undertake more enterprises, he should attend its meetings, actively engage in the duties assigned him, and not refuse to work, and then spend his time growling at other people who cheerfully perform their tasks and to the best of their ability aid in pushing forward every measure that will benefit the city. Anybody can grumble and find fault, but it takes some effort to devote one's self to the public good, and until the proprietor of the Herald-Transcript performs his whole duty in the position where he is placed, he has no right to berate those members who are exerting themselves, attending the meetings of the club and working on the committees."—Peoria Star.



Spanish Missions in San Antonio

New York's Public Service Commission

How the Commission Has Made Good in Regulating Public Service Corporations and the Part Edward G. Connette, a Former Director of this Board, Has Played in Bettering Metropolitan Transportation Facilities

An Editorial Interview

Edward G. Connette

AFTER three years of trial, Governor Hughes' policy of regulating public service corporations by commissions exercising broad powers of control seems to have vindicated itself. Certainly, the people of New York city, which is the scene of the activity of the Public Service Commission for the First District, have many evidences of the work done by or through this new agency for the supervision of those powerful organizations—often monopolies—which perform, under charters from the State, a public service for private gain.

"Considering the nature of these corporations," said a friend of the Commission, who explained some of its work, "and considering the hostility engendered in the public mind by past aggressions, reckless financial manipulation and disregard of franchise obligations, the only cause for wonder is that the State's purpose to bring them into proper relations with the public that they serve has been achieved with so little friction."

There has been some opposition from the corporations to specific orders of the Commission, and some lawsuits have resulted, but this was to be expected, considering the magnitude of the interests involved, and the chance for disputation offered by obscure passages in the law. But, as a whole, the corporations have accepted the regulation policy, frankly if not cheerfully, and most of them have shown eagerness to co-operate with the Commission in making improvements and remedying objectionable conditions.

One of the first acts of the First District Commission was to investigate the condition of the New York City Railway Company—the corporate name for the monopoly which operated and either owned or controlled the entire surface car system in Manhattan and the Bronx.

This investigation disclosed a condition of financial recklessness which astonished the country. It was followed by receiverships. The once compact Metropolitan system was broken up into its principal constituent parts under separate receivers, and the work of cleaning house, repairing and reorganizing was begun.

The immediate results were:

First—A curtailment of transfers.

Second—Better cars and better service.

The receivers, by petitioning the court, got permission to stop issuing transfers between lines under separate receiverships and to cancel certain unprofitable leases of other lines, which also resulted in the suspension of transfers. Unquestionably, this entailed some inconvenience and extra expense to the traveling public, and critics of the Governor's policy sought to blame the Commission for it. Their reasoning was that the Commission's investigation had caused the receiverships and the subsequent dismemberment of the street car system, with the attendant curtailing of transfer privileges.

"As a matter of fact," he continued, "the system was bankrupt before the investigation began, and the exposure simply precipitated what was bound to come sooner or later. Besides, it is now generally admitted that the Metropolitan managers in seeking to perfect their monopoly expanded the transfer privilege beyond the limits sanctioned by conservative operating management, and that some curtailment was inevitable if proper business methods were to be re-applied to the mismanaged system."

That there was too great a curtailment, however, was early recognized by the Commission, which in 1908 began proceedings to restore transfers between the Metropolitan lines running north and south and the cross-town line in Fifty-ninth Street owned by the Central Park, North and East River Railroad Company. This line had been leased to the Metropolitan at a rental so extravagant that the courts permitted the receivers to cancel the lease. Cessation of transfer exchanges followed the cancellation. After hearing both companies the Commission ordered them

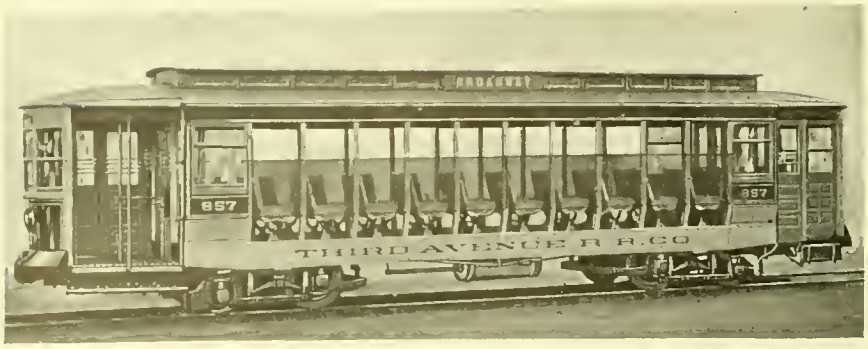
Subway Construction

New York City—Broadway at 33d Street, Looking Up-town

to resume the exchange of transfers and divide the fare on the basis of 3½ cents to the Metropolitan and 1½ cents to the cross-town line. The companies contested the order in the courts on the ground that the law giving the Commission power to order through routes and joint rates did not apply to street railroads. The courts held in favor of the companies. Then the Commission sought to get the law so amended that its power to order transfers would be made clear and explicit. The amendment was introduced in the Legislature of 1909, but failed of passage. It was re-introduced and passed this year, and was approved by the Governor a few weeks ago. Thus an obscure provision of the law has cost Commission and corporations an expensive litigation, and postponed the effort to restore transfers just two years.

Soon after the receivers were named, the Commission issued orders for a complete and thorough overhauling of all rolling stock. In the latter years of the monopoly's existence this had been allowed to deteriorate to such an extent that most of the equipment had to be practically rebuilt. The cars were without effective fenders or wheel-guards, and many of them had no modern brakes. In addition to ordering repairs, the Commission ordered the installation of effective wheel-guards and brakes. These orders applied to the Brooklyn cars as well as those in Manhattan and the Bronx. It took a year for the companies and receivers to comply, and it cost them hundreds of thousands of dollars, but the results were quickly apparent. Where before railroads and street railroads were killing 600 persons a year, they were now killing but 400, and that number is still decreasing; where before certain surface car companies averaged 20 per cent. of cars taken out of service every day on account of breakdowns, they were now taking out but 5 per cent.; where before one company operating over the Brooklyn Bridge had delays of 621 minutes a month, it now had only 27 minutes. The receivers not only made the improvements ordered, but they spent millions for new cars of modern types, so that the equipment of the surface lines, so inadequate and run down when the Commission was created, is now nearly, if not quite, up to requirements in quantity and thoroughly up-to-date and effective as to quality.

The service on all transportation lines has also been vastly improved since the Commission was created. While the strap-hanger has not been abolished, his numbers have been greatly reduced, and he has all but disappeared during the non-rush hours. In the subway, for instance, it has been frequently remarked that conditions would be unbearable now if it were not for the improvements made by order or suggestion of the Commission. These improvements would be more noticeable to-day were it not for the tremendous growth of traffic in the subway, a growth so rapid that the travel has absorbed every increase in capacity almost as soon as it has been provided. The annals of city transportation fail to show any similar increase in business. In five years the average traffic has increased from 250,000 to 800,000 a day, and it is still growing. As the subway was planned to carry a maximum of 400,000 a day, it will be seen that it is now doing twice the work for which it was planned.



Type of New Pay-as-You-Enter Open Car

Unless greater facilities had been introduced, of course, the subway would have been choked. First, the size of the trains was increased, then the interval between trains was reduced, then improvements in car construction and signal arrangements were made, and the force of platform-guards was increased to facilitate loading and unloading. The Commission suggested or ordered many of these improvements, notably the side-doors in cars on express trains, the additional platform-guards, and the improved system of speed-control signals to allow closer headway. Thanks to the side-door trains, which facilitate loading and unloading, and thus reduce the time of station stops, as well as to the speed-control signals, it is now possible to operate express trains at a headway of 1 minute, 48 seconds, and this is done every day during the rush hours, with only half the express equipment converted into side-door cars. When the other half is so equipped it is believed a headway of 1 minute, 30 seconds can be maintained with safety.

"There is only one thing more which can be done to increase the capacity of the subway, and the city is now spending $2,000,000 to do it," said the man before quoted. "This is the lengthening of the station platforms throughout the system, and providing additional exits and entrances at the more important stations. This work, which it is estimated will increase the capacity of the system by 25 per cent., will be completed in about eighteen months, and when it is done, the carrying capacity of the subway will have reached its limit."

It is not to be inferred, however, that the subway is even now operated at all times to its full capacity. The managers of the company leasing it at times display such a zeal in cutting expenses that they curtail the train service. This applies only to the non-rush hours, for during the rush they operate all the trains they have. In January last the Commission, as the result of complaints, caused an investigation to be made into the character of the subway service. This investigation was made by its transportation engineer, Mr. E. G. Connette, formerly general manager of the Worcester Consolidated Street Railway Company.

Mr. Connette made a thorough study of the methods of operation of the system and prepared a schedule for increased service, which he submitted to the Commission. This schedule called for the operation during the rush hours of as many trains as the physical limitations of the subway would permit, and during the non-rush hours a headway of not more than two minutes between trains. The Commission held a hearing, at which the Interborough Rapid Transit Company, the lessee of the subway, was called upon to show cause why its service should not be increased as provided in the schedule. Frank Hedley, general manager of the company, made a vigorous protest against the proposed schedule and declared that it would be impossible with the present equipment to maintain it. Mr. Connette and Mr. Hedley then went before Commissioner Eustis, and, after an hour's figuring, the Commission's engineer proved that the operation demanded by the schedule was possible. However, at the request of Mr. Hedley, and in order to give him more time to change from the rush-hour operation into the non-rush-hour operation, a modification was adopted permitting the operation of trains in the non-rush hours at a headway of two minutes and a half instead of two minutes. This schedule was adopted by the Commission and put into effect by the Interborough Company. The improvement was noted immediately by the traveling public, and although crowding during the rush hours still continued, there was a noticeable improvement in the rush-hour congestion, and a great relief apparent during the midday hours.

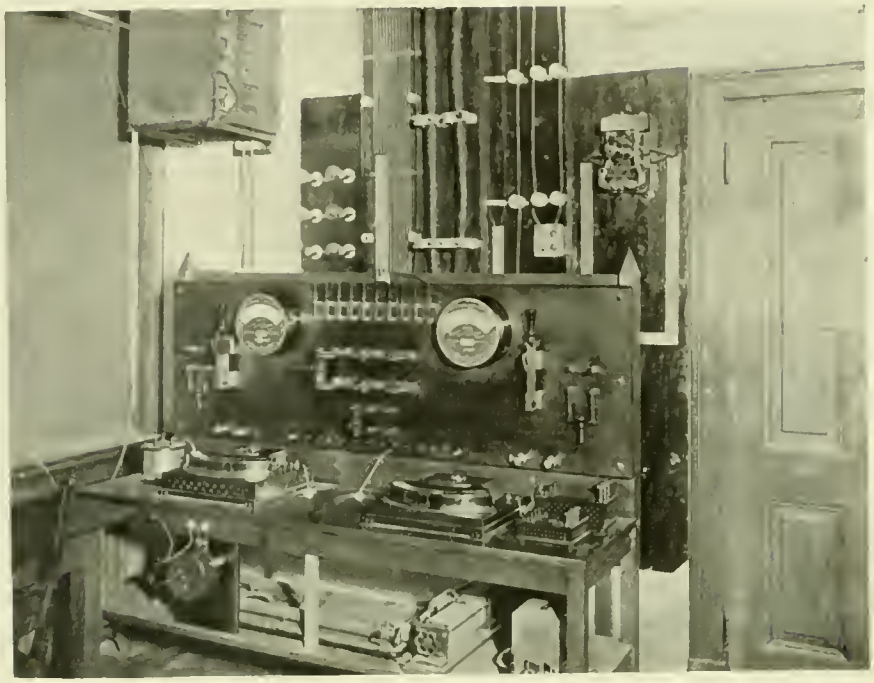
"This piece of work," said our informant, "showed that Mr. Connette was capable of improving the operation of the New York subway, conceded as one of the

Fender Test with Life-like Dummy

best managed and best operated railroads in the world."

Similar instances of the improvement in the service of the surface lines, not only in Manhattan and the Bronx, but also in Brooklyn, Queens and Richmond, might be cited as the result of the Commission's work. While it is impossible with the present facilities to prevent congestion in the rush hours, the Commission has prescribed changes in routing and operation which have materially bettered conditions.

Mr. Connette is the head of the transportation department of the Commission. Under the law creating it the Commission exercises supervision over all transportation companies within the limits of Greater New York, and it is its duty to see that all such companies provide safe and adequate service. For the purpose of carrying out this provision of the law, the Commission organized a transportation department, and under Mr. Connette, this department exercises a constant supervision of the operations, equipment and general physical conditions of the railroad and street railroad companies. He has a bureau of transit inspection in charge of a competent engineer, who has charge of thirty-five or forty inspectors who are kept busy night and day looking into causes of complaints, or keeping tab on the companies to see that the orders of the Commission in regard to the operation of cars and trains are obeyed.



Portion of the Electrical Laboratory of the Commission

These inspectors are the eyes of the Commission, and when it is considered that they have to keep in daily view the operations of a transportation system comprising nearly 2000 miles of track, operating 12,000 passenger cars, carrying 1,500,000,000 passengers per year, and serving the transportation needs of a community of 4,000,000 persons, it may be imagined that this small force of inspectors has its hands reasonably full.

All complaints in regard to service and equipment are sent to Mr. Connette for investigation. If passengers complain that the cars are too cold in the winter, it is Mr. Connette's duty to check up the offending railroad and ascertain the cause of the complaint. One of the results of his work was the adoption last winter of an order for the heating of street cars similar to the regulation which prevails in Massachusetts. This order requires all street railroad companies to maintain in their cars and trains, when the outside temperature is forty degrees, or below, a temperature of from forty to sixty-five degrees. Since the adoption of this order the complaints as to improper heating of cars have greatly decreased in number, and conditions last winter were better than they had been for years.

If the engines of a steam railroad, or the electric cars make so much noise that residents along the route complain, it is Mr. Connette's province to look into the complaint and see that the company exercises due diligence in preventing noise, for this is another subject covered by the Commission's orders. If trains on the elevated railroad are unduly crowded, Mr. Connette is called upon to investigate, and if he finds that the company is not running trains long enough or frequently enough, his report to the Commission is invariably followed by an order, or direction to the company to improve its service.

Ferry-boats, too, come within his scope of work. Not long ago, a resident of Flushing, Long Island, complained that the ferry-boats of the Long Island Railroad Company across the East River had defective windows, which admitted the water during a rainstorm, were deficient in lighting facilities, and at times did not wait for the arrival of trains from Flushing. Mr. Connette put his inspectors on the work, with the result that the company voluntarily substituted new boats for the ones complained of and improved its schedule so that the complainant had no further occasion to miss his boat.

"One of the most important pieces of work undertaken by Mr. Connette and recently completed was the physical valuation of the Third Avenue Railroad system in Manhattan and the Bronx," concluded our informant, in speaking of Mr. Connette's work. "This system, which has been in a receiver's hands since February, 1908, is undergoing reorganization, and in order to pass intelligently upon the proposed issues of stocks and bonds by the reorganized company, the Commission had to have an accurate idea of the present value of the property. To get at this, Mr. Connette was instructed to make a physical appraisement. This he did with a thoroughness which highly gratified the Commission.

"In the complex life of a great city like New York the problems presented to the traffic regulator are ever varying, and the man who would meet them capably must keep himself abreast of the times and ever alert. This Mr. Connette has done. He not only satisfies the Commission, but he stands well with the managers of the various corporations under its jurisdiction."

The Manufacturers' Association of St. John's, Newfoundland, will hold an Industrial Fair in conjunction with the government's Agricultural Fair, Oct. 31st to Nov. 5th.

Nature's Debt Paid

Again is this Board Visited by the Destroying Angel and Called Upon to Mourn the Loss of Three Members

George Farnum Hewett

AN old member of this Board, George F. Hewett died at his summer home in Falmouth July 23, of dilatation of the heart. His age was 74 years and 18 days.

George Farnum Hewett was born in Worcester July 5, 1836, the son of Elbridge and Nancy (Wadsworth) Hewett. He was educated in the public schools, and attended Worcester Academy after graduating from the high school. He left the Academy after a few terms to work for his father, who conducted a general store and lumber business.

The call of the West proved attractive to him, and in 1854 he entered the employ of the Cleveland & Toledo Railroad, now the Michigan Southern, as a brakeman. Mr. Hewett, who, by promotion, had become station agent at a new railroad junction, was privileged to name the village which grew up about it, and the prosperous town of Millbury, Ohio, bears the name he selected.

In 1859 he returned to Worcester, and the following year he founded the business which he successfully guided until his death. The first store was on Front Street, but the business rapidly grew and three years later a larger store on the same street was rented. He branched out until the business included wholesale and retail liquors, bottling and the manufacture of tonics. During this period he removed to the corner of Waldo and Foster Streets. The business outgrew these quarters, a corporation was formed with Mr. Hewett at the head, and the present building on Waldo Street was erected for the company by the Dwight Foster heirs. The company is now one of the largest in New England, and its plant equipment is said to be the largest.

George F. Hewett

Mr. Hewett was a member of Quinsigamond Lodge, A. F. & A. M.; Hiram Council, A. & S. M.; St. Andrew's Chapter, A. A. M.; Boston Commandery, Knights Templars, and Worcester Lodge of Perfection. He was also a member of the Worcester Lodge of Elks, Royal Arcanum, and the Red Men. He was a charter member of the Worcester Continentals, and a captain in the Ancient and Honorable Artillery Company of Boston.

He was in the Common Council eight years, and a member of the Board of Aldermen one year. He served as a trustee of the City Hospital, in which he was greatly interested.

In 1858 he married Miss Maria L. Knox at Painesville, Ohio. He is survived by a daughter, Mrs. Mabel E. Bigelow of 69 Cedar Street and a sister, Mrs. Mary Wheeler of Grafton.

Mr. Hewett was always greatly interested in the staff of employees who had helped to make his business such a success. In return, they were loyal and devoted, holding him in esteem for his kindheartedness and just dealing, and the news of his death was received by them with genuine sorrow. The organizations to which he belonged had long since learned to turn to him when in need of personal or financial assistance. So, too, he was generous, but not ostentatious, in his private charities. The report of his demise was heard with sadness by a host of friends and acquaintances.

Edward Blake Dolliver

Edward B. Dolliver, long identified with Worcester manufacturing interests, died July 6th of peritonitis. He had been ill for only a few days, and the sudden ending of this man of many activities brought sorrow to an ever-widening circle of friends.

He was born in Grafton Sept. 1, 1848, son of Samuel B. and Delia E. (Blake) Dolliver. He was educated in the common schools, leaving at the age of fourteen to learn shoemaking with his father. After seven years at this business he became clerk of the Quinsigamond House in North Grafton, remaining there two years. He continued in similar employment until 1872, during which time he was connected with hotels in Worcester and Boston. His next venture was in Boston in a restaurant, of which his father was part owner. He

EDWARD B. DOLLIVER

bought out the business in 1873 and continued in it until September, 1876.

In November of that year he returned to Worcester and for three years was a workman in the factory of the Worcester Machine Screw Company. When, in 1879, A. W. Gifford bought the interests of his partners and became sole owner, Mr. Dolliver was placed in charge of the office.

Here he found opportunity for development and when, in 1900, the business was sold to the Standard Screw Company, he was made a director and treasurer of the concern, and manager of the Worcester branch of the company, which positions he held at the time of his death. He was also President of the Arcade Malleable Iron Company.

Mr. Dolliver was affiliated with the Masonic fraternity. His membership in Quinsigamond Lodge dated from 1880, and from 1887 to 1889 he served as its Master. He was a trustee of the permanent fund and treasurer of the Board of Trustees of the charity fund. He was a member of Eureka Chapter, Royal Arch Masons; Hiram Council, Royal and Select Masters; Worcester County Commandery, K. T.; Worcester Lodge of Perfection.

He was also a member of this Board; of the Worcester County Mechanics Association, of which he was a director in 1901-3; of the Worcester Continentals, in which he had been an officer; of the Tatassit Canoe Club, and of the Leicester Country Club, of which he was a director.

May 6, 1875, Mr. Dolliver married Augusta O. Pratt of Grafton, who, with one daughter, Winifred O., survives him. He also left one brother, Henry W. Dolliver of Whitinsville, and a sister, Mrs. A. W. Gifford of this city.

Wright Seth Prior

The receipt of the intelligence that Wright S. Prior, an old and valued member of this Board, was no more, caused a poignant sensation of sadness in scores of Worcester homes.

He was recently in Worcester on a visit combining business and pleasure, leaving on June 18 for his home in Denver. He was ill at the time of his arrival there, and an operation for appendicitis soon after revealed the fact that the disease had reached too advanced a stage for medical skill to combat, and on July 5 the end came.

Mr. Prior was born in Underhill, Vermont, March 30, 1867, and gained his education in the public schools, Underhill Academy and Norwich University at Northfield, a military institution noted for its courses in the sciences. From this school he graduated with the degree of civil engineer, and at the time held the rank of captain of the military corps.

After graduation he entered, in 1889, the office of the city engineer of Brockton, Mass. After a short time there, he went to Tallapoosa, Ga., where he held a position as topographer of the preliminary survey of the Georgia, Tennessee & Illinois Railroad. In 1892 he came to Worcester and for several months was in the office of City Engineer F. A. McClure. He then removed to Atlanta, Georgia, where he engaged in business for himself as a railroad and city engineer.

In 1893 he returned to Worcester and for five years was in charge of the field work of the city engineering department. In 1898 he was elected Street Commissioner, retaining the position for six years.

After a short time in the lighting business he removed with his family to Denver, taking charge of the development of the mines at Empire, Colorado, belonging to the Conqueror Mining, Reduction & Power Company, which he had been instrumental in organizing during the latter part of his term as Street Commissioner, and which he had just succeeded in putting upon a paying basis.

He was well known in militia circles, serving as Second Lieutenant of the Wellington Rifles, which he helped to organize. He was also affiliated with the Masonic fraternity as a member of Athelstan Lodge.

October 1, 1896, he married Mary E., sister of Charles T. Tatman, President of this Board. His wife, with five daughters, survives him. Bert H. Prior of this city is a brother. He also leaves a mother, Mrs. Lucy J. Prior, of Jericho, Vt.; another brother, Willis G. Prior of Denver, and three sisters, Mrs. George E. Tyrell of Underhill, Mrs. Elwin E. Thompson of Northfield and Mrs. George H. Hutchinson of Jericho, Vt.

WRIGHT S. PRIOR

The New England Fair

Plans Perfected to Make this Annual Affair, which Marks the 92d Year of the Worcester Agricultural Society and the 43d Year of the New England Society, a Great Attraction

THE celebration of the ninety-second birthday of the Worcester Agricultural Society will be commemorated by the annual New England Fair, on the grounds at Greendale, Sept. 5, 6, 7 and 8. This year marks also the forty-third birthday of the New England Society, which coalesced with the Worcester Agricultural back in the seventies, and has since that time been a factor in the annual fair.

A glance at some of the early reports of the societies, now in the custody of Secretary Elisha S. Knowles, at the society's office, Room 1, Walker Building, reveals some interesting facts concerning the conduct of the "cattle-show" of the early days, and the names of the men who were then at the helm include some of the city's first citizens, one president at least having occupied the exalted position as the Governor of this Commonwealth.

The scope of the fair is rather larger at the present time, the features formerly consisting only of purely agricultural displays, trials by yoke cattle, with a few races by fast horses, though the reports show that at a certain stage this latter form of entertainment was deprecated as being a departure from the province of a show intended to promote and foster the useful things connected with an agricultural life.

Some of the reports of committees in those days were in the form of poems, pretty good poetry, too, some of it, showing that the humdrum existence of tilling the soil had not entirely driven communion with the Muses out of the heads of the farmers.

In the old days a prominent feature was a banquet, to which the Governor of the State was invited, and he, with others, delivered addresses. While the Governor is given an invitation annually, the rather pleasing part of the programme which included the eating and speaking has been discontinued.

For a number of years the growth of the fair was slow, and several unsuccessful seasons, due probably to inclement weather, made the outlook for the future somewhat discouraging. But of late years, with a change in policy and an infusion of "young blood," backed by the old New England spirit of determination, the organizations have taken on a new lease of life.

To-day the fair is a peer of any in the country, and it's slogan, "New England's Greatest Out-door Show," is far from a misnomer.

The interesting prospectus just issued gives one a comprehensive account of the plans for making the fair of 1910 a record-breaker.

This pamphlet or magazine, called the New England Fair Bulletin, is an attractive fifty-six page publication, with striking covers done in colors, the design being the first choice in a competition by some of the best local artists in that line of work. It is a handsome booklet, the best ever put out by the societies, and is sure to attract universal attention—just what they want.

It is a readable and interesting book of information, containing, as it does, everything one would like to know concerning the Big Fair which is to be given this year on the Greendale grounds of the societies, Sept. 5, 6, 7 and 8, opening as usual Labor Day.

This year it has been deemed advisable to give only two evening performances instead of three, as formerly, and Monday and Wednesday, Sept. 5 and 7, are the nights fixed for that purpose.

On Wednesday night, in addition to the regular programme, the bill includes a big amateur athletic meet, held by sanction of the N. E. A. A. U., which always is a taking feature with Worcester audiences.

Probably the star attraction, the one thing most interesting to the general public, is the promised daily flight of the big airship, with the noted young aeronaut, Frank Goodale, as aviator.

His recent spectacular flights over New York city after dark have stamped him as being one of the most skillful and daring operators in his profession.

During his visit here an attempt will be made to break records for time and distance. He will also make an ascent each evening, weather permitting.

Looking over the Bulletin, one realizes the immense amount of work which is being put in by the officials of the societies and the heads of the several departments, to make this year's show better in every way than any previous one.

The grounds at Greendale have been enlarged during the summer, and changes made about the main entrance gate which will be much appreciated. The addition of new ticket offices, where admissions are sold, will be a welcome transformation to many who have had to get into the "rush-line" in previous years.

The Out-door Auto Show, first given by any Eastern society last year, will be repeated this, only more room and increased facilities will make it better than before.

Besides the Bulletin, the society issues, under separate cover, a complete premium list showing how to enter to compete for a part of the $10,000 or more which it offers as an inducement to exhibitors. This amount is exclusive of special awards, cups, trophies, etc., donated by individuals, clubs and associations for merit along special lines.

The society promises a lot of fast racing events, special track features, a big out-door vaudeville programme day and evening, a captive-balloon in which the public may ride at a small cost, a splendid horse-show, and other amusements, terminating the programme of each evening with a grand display of fireworks.

Music will be furnished by the Battery B and Worcester Brass Bands, and in addition there has been engaged the Empire Woman's Orchestra of twenty-five pieces, a decided novelty here and bound to be a pleasing one, since it is composed of musicians of note, both vocal and instrumental.

Altogether the bill of particulars of the big New England Fair is a most complete and comprehensive one, and should prove a strong magnet to attract amusement lovers.

Editorial Reflections

In Picking Out a Site what Should Appeal to a New Industry?

IN selecting a site for a new industry a corporation has or should have many things to consider. It is conceivable that a city offering no bonuses might be a much better place to locate in than one offering free sites, a plant, and exemption from taxation for a period of years. No chain is stronger than its weakest link, and no factory is sure of permanency that is operated by inefficient, sickly and dissatisfied help.

The fact that Worcester has constantly on hand 35,000 skilled and satisfied laborers—men and women—makes this the ideal industrial community that it avowedly is. That and our diversified industries constitute an asset far greater than that possessed by any community teeming with vacant factory sites—and malaria.

In a recent work issued by the Chicago Association of Commerce, entitled "Chicago," the case for the Windy City is presented in most convincing fashion, but there are printed in the volume some figures that ought to afford Worcester people a great deal of satisfaction, particularly in the light of the fact that so much emphasis is always placed here by some representatives of the daily press on the other side of the story.

For instance, the per capita debt. Every wise manufacturer, in picking out a location for a plant, will examine carefully into the resources of the community into which he is moving. He will not, if he is at all canny, cast his lot either among a contentious or an extravagant people. Either sort is equally fatal to the tax rate.

The figures in "Chicago" of the per capita debt are guide posts pointing the wise manufacturer away from some communities and toward others. For example, New York has a per capita debt of $189.01, and Boston is only a step behind with $172.52. Compare with either of these cities Worcester with a per capita debt of $44.87—a trifle over one-fourth that borne by the residents and manufacturers of the Hub.

But five large cities in this country—and one of them Washington, a purely residential centre—make as good a showing as Worcester. The debt per capita in St. Louis is $28.17; in Detroit is $33.34; in Milwaukee is $33.04; in Chicago is $40.07, and in Washington is $45.74. Other cities of a type similar to this are much more heavily debt-ridden. For instance: Philadelphia, $50.73; Buffalo, $58.09; Cleveland, $69.02; Baltimore, $85.67; New Orleans, $88.46.

The tax rate is another thing always to be considered. Worcester, with a tax rate of $16.40, compares favorably with all cities of her size and with many of the very largest.

If a manufacturer is wise, he will locate his plant in a city that offers first-class educational facilities for his own children and the children of his workmen. Many cities have a full educational equipment offering the widest range along both vocational and cultural lines, but no city in the country of its size even approaches Worcester. Indeed, many of the largest have not as many students enrolled in the higher institutions of learning. Worcester, with over 1500 pupils in her preparatory schools, colleges and universities, exceeds even Baltimore, which only boasts 1140, notwithstanding the fact that it is the seat of Johns Hopkins University. Cincinnati, with its university, can muster but 1061, falling just behind Milwaukee, which enrolls 1122 persons in her colleges and private schools. San Francisco reports but 373 undergraduates, keeping close company with Buffalo's 394 and Detroit's 266.

Again, not alone is education desirable and essential if the rising generation is going to do increasingly effective work, but it is necessary that the workmen should labor in a healthy climate and a community regardful of sanitation and hygiene. The record of Worcester is unexcelled in this respect. No city in the country of anything like our size has as low a death-rate as we can show. The death-rate in eight of the largest cities of the country for 1909 was as follows:

Cincinnati,	19.57
Baltimore,	19.47
Pittsburg,	19.07
Boston,	18.79
New York,	18.58
Philadelphia,	18.38
St. Louis,	16.30
Buffalo,	16.25

The death-rate in Cleveland was 15.30; in Detroit, 15.69. The death-rate last year in Worcester was 15.09. Of what avail is it to a manufacturer to locate in a city with a high tax-rate, a high debt-rate, a high death-rate and insufficient educational advantages, even if he can obtain a few temporary advantages in the shape of cheap land, tax exemption and a vacant factory?

The highest type of skilled labor is constantly on hand in this city. It does not have to be imported from abroad, neither does it have to be confined in a stockade after it gets here. It is not only skilled manually, but mentally. Daily it grows more and more intelligent, more and more alive to what our industrial civilization means, more and more anxious to fit itself for a larger measure of usefulness. Our workmen are thrifty, law-abiding, honorable. No manufacturer who comes to Worcester will be met by hostility, suspicion, or graft. If he comes here determined to cast in his lot with us, we ask of him but two things: that he shall pay 100 cents on the dollar, and shall make as good a product as it is possible for brains and money to produce.

President Benjamin Harrison, than whom this country never boasted a more sagacious chief magistrate, in addressing a commercial organization, once said: "After you have exhibited sites and statistics to show the man seeking a business location, he will want to know about the homes, the schools, the churches, the social and literary clubs; whether it is a place where domestic life is convenient and enjoyable; where the social life is broad and hospitable; where vice is in restraint; where moral and physical sanitation has due provision; where charity is broad and wise—a city to which men will grow attached and to which they will come back."

One such city is Worcester.

The Gentlemen from Texas

In cruder and breezier days, when an energetic but light-waisted business man found the pace getting too strenuous for him, he was in the habit of separating himself from his wonted habitat between two days, leaving behind him for the benefit of his creditors and the sheriff a cryptic motto inscribed on his office door: "Gone to Texas."

Just what "Gone to Texas" really meant was never accurately mirrored to the lay mind, but as a phrase it was always associated with something shady, not to say downright disreputable. As a summary of existing conditions, it was both terse and expressive, but like "Dead as Chelsea," and other similar phrases, it left a bad taste in the mouth. Finally, it died out. The existing generation knows it not.

Other phrases took its place reflecting almost as keenly on Texas. General Sheridan once remarked that the people of Texas needed to raise less h——l and more cotton, and other statesmen and warriors and business men did not hesitate to take their little fling at the Lone Star State.

For a long time Texas was too big, too lazy and too self-satisfied to pay any attention to the metaphorical mosquito bites of an unfriendly press and prejudiced politicians, but within the past ten years Texas has waked up. The discovery of the Texas oil wells put Texas on the map, but the enterprise, ingenuity and solid worth of her people have kept her there, and today the politicians and business men of the North recognize this section of the Union as a vast empire of itself, with possibilities of development still unguessed.

At the annual banquet of this board in April last the principal speaker was a senator from Texas, and at the present time a delegation from the Boston Chamber of Commerce is in Texas cementing closer business relations between the Hub and San Antonio, Houston, Galveston and the other great Texan centers.

Not to be outdone, Houston is sending a delegation of her leading business men North, and they are making a tour of all the principal cities from St. Louis to Toronto and from Boston to Oklahoma City.

They will return to their Southern home with a new idea of the magnitude, the resources and the hospitality of our common country, their horizon will be broadened, their provincialism, if they have any, will be gone forever, and they will know at last, if they do not know it now, that the South cannot progress without our assistance and support, and the North cannot grow without their co-operation and good will. If, as a nation, we are to prosper, our principal endeavor must always be to see who best can serve and best agree.

Worcester is one of the three New England cities that our Houston visitors come North to analyze. They have, at the invitation and urgent request of this Board, extended the time devoted to the Heart of the Commonwealth from one hour to five. They will meet here this month a people proud of their own prowess and sincerely anxious to impress our visitors with our great commercial development, but equally proud of Texas, and equally anxious to learn about the commercial development of Houston, of San Antonio, of Galveston, and of the entire Southwest.

The gentlemen from Texas will receive many warm welcomes in their pilgrimage from Dixie to the Great Lakes, but nowhere will they receive a warmer welcome than in Massachusetts, and nowhere in Massachusetts will they receive a warmer welcome than in its Heart. The primal reason for this visit is, of course, purely commercial, but it will pay big dividends in something more valuable than money. Commercial relations between Worcester and Houston, for instance, will be closer, more valuable and enduring in the future than they have ever been in the past, but far above all that this journey will result in a new birth of intelligence, of mutual admiration, of increased respect each for the other on the part of entertainer and entertained.

The Worcester Magazine welcomes our Southern guests and in their honor has devoted no inconsiderable space in this issue to telling our people and the people of the world what two model communities—San Antonio and Houston—are accomplishing in the great but still too little known State from whence they hail. The North and the world ought to know Texas better, for it has in it the area, the energy and the wealth of an empire. It is no longer the butt of the jibe-maker. To-morrow it can, if it will, cradle a nation in its generous arms.

Taking Account of Stock

Quietly, unostentatiously, but none the less certainly, Worcester continues to develop along permanent, enduring lines. The six months of 1910, ending with the first of July, marked the close of another period of marked expansion justifying the faith in this city possessed by every one of its well-wishers at home and abroad.

The total valuation of the city has now risen to $141,228,602, a gain of $7,884,400 in the last twelve months. The assessors report a tax-rate for 1910 of $16.40, which is $1.45 less than the $17.85 average tax-rate in Massachusetts this year, and allows our merchants and manufacturers to do a prosperous and growing business without any additional overhead charges, this being the rate for 1909 as well.

The city during the past six months has been unique among industrial communities in its absolute freedom from labor troubles, and the building business continues at its accustomed high level. While the gross business from January to July in the building line was not as great as in the corresponding period last year, it would have exceeded 1909 figures had it not been for the Union Station permit of $500,000 issued in the first six months of last year. The number of permits issued for new buildings thus far this year is actually greater than in 1909, and there is no apparent cessation in construction work, not only of homes and apartment houses, but of shops and factories as well. In the first six months of 1909 the number of permits actually granted was 611, calling for an expenditure of $2,264,726. In the first six months of 1910 780 permits were issued, entailing an expenditure of $1,778,873. As a matter of fact much more than $2,000,000 worth of work in the building line has been done in Worcester this year, as the bulk of the work on the new Union Station has been done in the last six months. At the present time not only the Union Station, but the Worcester Electric Light Company's $600,000 plant, is being pushed to completion. And in addition the Warren Leather Goods Company, the Worcester Pressed Steel Company, and the immense Bradley Car Works plant at Greendale have either just completed big additions to their works or are about entering on their construction.

There are but three vacant stores of any size in the city, and one of the largest shoe firms of the East is contemplating leasing one of these. Ground was broken last month for the construction of an auditorium to cost $25,000, and the plans are complete for the erection here of one of the largest vaudeville houses in the country. Realty has never been more active in this city than it is to-day. No less than a dozen suburban properties are being developed and the demand for houses is so great that it is almost impossible to meet it. The merchants of the city are making Worcester more and more of a metropolis, and it has come already to be the shopping centre of fully 500,000 people.

Many communities now barren of manufacturing plants would rejoice with exceeding great joy to be able to announce the acquisition of a business as potential as any of those mentioned, but Worcester has grown so used to seeing her manufacturing concerns expand that we are in danger of not appreciating at its true worth what this splendid growth means.

The Bradley Car Works alone, with its pay-roll of 1000 men, constitutes an industrial colony of its own, but this vast business has been created here and so passes unnoticed by our people when it takes on proportions so great as to stagger the stranger.

Our annual tonnage has now risen to 2,314,715 tons, and we are handling 600,000 freight cars a year in our railroad yards loaded with raw material destined for Worcester or filled with manufactured products shipped out of this city.

It is not good that we should be satisfied with the commercial progress that we are making. We must constantly strive to better it and add to it, but it is a good plan as we go along, and especially as we listen to the siren song of other communities, that we should pause long enough to take account of stock.

When we do, we observe that Worcester is not only growing along solid, substantial, successful lines, but that there is every indication that she will continue so to do

A Truly Augustan Month

The month of August promises to be one of activity and achievement by this Board, even if it is supposed to be the quietest month in the year in business circles. On August 9 there is to be held in this city the annual outing of the various publicity associations of New England The brightest men in the advertising field in this section are to come here for a day's recreation and conference, and the officers of this Board and the newly organized Worcester Publicity Association will obtain material benefit from the visit, filled as it is bound to be with inspiration for all of us who are laboring to make New England better known and better appreciated.

Still later comes the visit to this city of the "live wires" of Houston, Texas the men who are doing things in that empire of the Southwest. The commercial relationships between Massachusetts and Texas are bound to be much closer in the future than they have been in the past. Both Galveston and Houston are engaged in improving their shipping facilities, and the Boston Chamber of Commerce is moving even now in the direction of securing new and additional lines of steamers to the southward for the express purpose of fostering trade with the country for which these cities act as depots. We want their raw materials in New England and we want to sell them our manufactured products. Nothing but good can come of such a visit, and it is highly gratifying to the Worcester Board of Trade to know that this city was selected as one of the larger northern communities in which our visitors will spend nearly a day in investigating our products and telling us about what they have to sell.

In the growth of her manufacturing industries during the ten years ending with 1900, Houston claims to have led in volume and proportion every other trade centre in the South. She had then 507 industries, a gain of 141 per cent. over 1890, with an increase of invested capital of 97 per cent. In the ten years that have since elapsed she has shown an even more remarkable growth. No city in the Southwest has developed faster in the past twenty years, and a visit to New England and to Worcester by the men who are bringing this development about means everything to the business interests of both cities.

Houston is not only a great jobbing centre, but a great lumber centre. The Texas forests include sixty-one kinds of timber of commercial value, and a photograph of a Houston lumber train is calculated to make even a Michigan man or a proud Oregonian sit up and take notice. Ten years ago Houston sold $19,000,000 worth of lumber annually, and she has not gone back any in the last decade.

As for cotton, Houston is the leading cotton centre in a great cotton-growing state. During the year ending Aug. 31, 1907—the latest statistics at hand—the cotton receipts for the city of Houston were 2,967,535 bales, or almost one-fourth of the entire cotton crop of the United States. This cotton had a market value of $152,000,000. With cotton selling to-day on 'Change at over 16 cents a pound, the wayfaring man, though a fool, need not err therein when he comes to the conclusion that Houston is a financial friend to be cultivated by the cotton manufacturing North.

Furthermore, as a final reason why the busy, bustling North should be interested in Houston, it may be remarked that the State of Texas enjoys the record of having produced the greatest yield of crude oil ever credited to a single state in a single year, Pennsylvania to the contrary notwithstanding, and Houston is in the very heart and centre of the oil-producing district and the home of most of the wealthy operators.

It only remains to be added that the city had, in 1907, bank clearings amounting to $1,125,856,913, and that last year the figures approximated a billion and a half dollars to convince the veriest tyro that this visit to Worcester may and ought to mean something of substantial value to this community.

This, however, does not conclude the important business of the month to this Board, nor to this city. On Aug. 31 and Sept. 1, 2 and 3 a delegation from this Board will go to Providence to participate in the deliberations of the Atlantic Deeper Waterways Association, when ways and means will be discussed to improve all our intercostal system from Long Island Sound to Key West.

Too long have New England and the other Atlantic States sat idly by and allowed the rest of the country to be exploited at our expense. We need shipping facilities by water in New England far worse than they need them in Arkansas or Kentucky, but Arkansas and Kentucky, unfortunately for us, get the appropriations and we do not.

Local July Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

Hot weather has helped the distribution of merchandise in some lines of retail trade and retarded others, but leading dealers report the volume by comparison as satisfactory.

Some curtailment is still noticeable among leading manufacturers, but the general outlook is good.

Local bank clearings for the first six months of this year are as follows:

	1910	1909	P. C.	1906	P. C.
Jan.,	$9,533,408	$7,415,248	+28.6	$7,075,983	+34.7
Feb.,	8,605,742	5,970,095	+44.1	5,569,739	+54.5
Mar.,	10,298,362	6,836,215	+50.6	7,784,644	+ 3.2
Apr.,	10,202,582	6,997,239	+45.8	7,203,436	+41.6
May,	9,707,395	6,921,314	+40.3	6,647,346	+46.0
June,	9,969,490	7,467,394	+33.3	6,307,795	+58.1

Failures in Worcester County for the month total fourteen, liabilities of $65,821, and assets of $10,960, while for the corresponding month of last year they showed a total of ten, with liabilities of $44,148, and assets of $12,650, while in 1906 they showed a total of twelve, with liabilities of $28,189, and assets of $7,060.

Publicity for Rockford

An Estimate by an Iowa Editor of the Effectiveness of Large Advertising Appropriations

"Rockford is to get a chamber of commerce which is to exploit Rockford. One of the finest cities in the State, situated in one of the richest regions of the world, ought not to require much exploiting. And in these days, when all sorts and conditions of towns are trying to boom themselves in this style, there seems little benefit to be expected from a campaign of this kind. There is talk of 400 members at $25 per head. That would mean $10,000, which is merely a drop in the bucket, if the campaign is to be waged in a style that will attract attention and that may or may not get results. Apparently, Rockford is worried because the census is not going to give her a very large increase in population. But what is worrying Rockford is worrying hundreds of other good towns in the middle West. The expenditure of $10,000 or of $100,000 is not going to help matters any if that money is simply to be put into use exploiting the town. If Rockford wants advertising, let her do something worthy of special note, let her do something original, something that is not being done in every other really ambitious town in the country, and she will get results. She will get the very best kind of advertising absolutely free, hundreds of thousands of dollars' worth, and she will attract the attention that no mere booming advertisement will attract. But if she is unwilling or unable to be original and to start something new, the best thing for Rockford will be simply to wait until the turn comes, as it is bound to come, and instead of leaving the best country and the best towns upon earth, the people again begin to flock into the middle West. That change may come soon. And soon or late, it is bound to come, for though they search the globe they will find nothing better and very little as good as Illinois."—Burlington (Ia.) Hawkeye.

Worcester Patents

Hartley W. Bartlett, Patent Attorney

L. W. Southgate, Telephone Relay or Repeater, No. 961,-815.

A telephone relay or repeater, comprising a coil or electro-magnet; and a microphone, having an electrode actuated by magnetic variation arranged in the field of the electro-magnet or coil, a permanent magnet holding this electrode magnetically suspended, and an adjustable piece for adjusting the pull of the permanent magnet on the electrode.

G. D. Moore, Wheel and Tire Therefor, No. 961,882.

A tire-holding device for a wheel, consisting of two clencher flanges, each having wide-faced projections arranged on the inner face thereof, and extending toward the other flange, and a tire having an inwardly projecting extension fitting between these flanges and provided with permanent depressions or cavities registering with said projections. The depressions in the tire may be provided with a sheet-metal lining secured in these depressions by vulcanization.

Joseph P. Hill, Clothes Driers, No. 962,147.

A clothes-drier, consisting of a drying chamber, racks slidable in and out of the chamber, rack fronts on the ends of the racks adapted to close one wall of the chamber, a guide-rod for each rack connected with the rack front, a frame mounted on the drying chamber adjustable transversely with respect to the guide-rods, and two rollers carried by this frame for engaging the opposite sides of, and guiding, this guide-rod, the rollers being each individually adjustable on the plate transversely with respect to the guide-rods.

Ericsson & Thorcen, Vacuum Cleaner, No. 963,701.

A vacuum sweeper, consisting of a casing having apertures, a screen for guarding the apertures, a bellows arranged thereabove, a rib comprising two metal strips stationed on the casing, a rib comprising two metal strips extending from the top of the bellows and coacting with the first-mentioned rib, a flexible hinge interposed between the strips of the ribs, and a handle for oscillating the top of the bellows.

Birmingham's $25,000 Fund

Birmingham, Ala., which has recently completed a splendid home for its Chamber of Commerce, is pushing a campaign to raise a continual fund of $25,000 annually for the support of the work of the Chamber. This hustling body is setting a pace that is attracting a great deal of notice among other commercial bodies. Secretary Walter G. Cooper of the Atlanta Chamber of Commerce was a recent visitor to Birmingham, where he made a special study of the present campaign and the successful campaign which resulted in the erection of the new building.

Booster Buttons

One of the latest ideas for the creation of a factory fund by personal subscription is that devised by the Danbury (Ill.) Commercial Club. Five thousand buttons, reading "Boost, Boost, Wanted—A Factory Fund," with Danville in large letters across the centre, have been secured. These are numbered from 1 to 5000 and will be sold at $1 each. The Danville 100,000 Club will assist in the sale of these buttons.

Worcester Quotations

Furnished by Thompson, Towle & Company
Worcester, July 20, 1910

BANKS.

	Bid	Asked
Mechanics National Bank	150	.....
Merchants National Bank	170	.....
Worcester National Bank	205	.....
Worcester Trust Company	325	.....

RAILROAD STOCKS.

Boston & Albany	222	last sale
Boston & Maine common	140¼	last sale
Boston & Worcester Elec. common	....	.....
Boston & Worcester Elec. pfd	37	.....
Fitchburg preferred	124½	last sale
New England Inv. & Sec. pfd	90	92
New York, New Haven & Hartford	151½	last sale
Norwich & Worcester	210	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investment	75	80

INDUSTRIAL STOCKS.

Crompton & Knowles pfd	150	.....
Denholm & McKay common	200	.....
Denholm & McKay pfd	100	103
Graton & Knight Mfg. common	130	.....
Graton & Knight Mfg. pfd	114	116
Royal Worcester Corset Co.	150	.....
United States Envelope common	53	55
United States Envelope pfd	111½	115½
Worcester Gas Light	280	.....
Worcester Electric Light	280	.....
Wright Wire Company common	102	.....
Wright Wire Company pfd	110	115

BONDS.

Amer. Writing Paper 1st 5's	88½	last sale
Boston & Worc. St. Ry. 1st 4½'s	98	.....
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5	basis
Marlboro & Westboro St. Ry. 1st 5's	....	95
Norcross Brothers 1st 6's	100	100½
United States Envelope 1st 5's	101½	102½
Worcester Cons. St. Ry. 1st 4½'s	94½	.....
Worcester & Marlboro St. Ry. 1st 5's	98	.....
Worcester & Southbridge St. Ry. 1st 4½'s	....	87

Current Events

General

June 23. Governor Draper presents diplomas to sixty-seven graduates of Holy Cross College.

24. Worcester grammar schools graduate 467 pupils.

28. Second annual meeting of the Child Conference for Research and Welfare opens at Clark University.

July 1. June stamp sales in Worcester Post office amount to $35,631.45, an increase of $3533.84 over June, 1909.

George F Cole, teacher of German in South High School, will teach a year in Germany in exchange with teacher from there.

6. Emmett Dunn Angell of Corvalis, Ore., assumes supervision of Worcester playgrounds.

7. S. H. Williams of Mechanicsville, N. Y., succeeds William C. Muth, resigned, as secretary of the Worcester Railroad Y. M. C. A.

8. Worcester Art Museum wins contests over $1,200,000 Salisbury real estate legacy.

11. Clarence A. Evans, deputy bank commissioner of Massachusetts, elected Vice-president of Merchants National Bank.

13. Dr. Albert Wood, eighteen years chairman of trustees of City Hospital, resigns.

15. Post-office receipts for first half of 1910 show $134,031, an increase of $30,552.01 over corresponding period of 1909.

Work begun on Auditorium building.

20. Dr. Charles A. Drew, superintendent of Worcester City Hospital, appointed Chairman of Board of Registration of Nurses by Governor Draper.

Industrial

June 22. C. A Ring, construction engineer, furnishes designs for paper mills and power plant of Brompton Pulp & Paper Co. at East Angus, Que.

30. E. J. Cross completes five story brick addition to factory of Warren Leather Goods Company, 82 Austin Street.

July 5. Edward D. Ward awarded $41,000 contract for State Armory at Hudson.

8. Crompton & Knowles Loom Co. make contract with Worcester Electric Light Co. for 400 horse power of electric energy per day.

13. Worcester Electric Light Co. apply for authority to increase capital stock from $800,000 to $1,000,000.

Worcester Consolidated Street Railway Co. buy 5000 k. w. generator to be installed in Fremont Street power-house and order twenty large closed cars from Osgood Bradley Car Co.

City Hall

June 28. Permit granted Worcester Auditorium Company to erect building at cost of $25,000, James Miles & Son to build.

July 1. General coal contract for ensuing year awarded to People's Coal Company. City Hospital contract awarded to F. E. Powers Coal Company.

Board of Assessors announce tax rate of $16.40 per $1000, the same as for 1909.

7. Figures compiled by Board of Assessors show total valuation of property in Worcester $111,228,602, a gain of $7,884,100 over 1909.

11. State Tax Commissioner Trefry notifies Worcester Board of Assessors that under the new law the State will pay taxes of $6842.79 on lands of Worcester State Hospital and Worcester State Asylum.

13. First hearing by commissioners for elimination of northern grade crossings.

14. City Treasurer Clinton receives $150,000 from sale of bonds.

Necrology

June 28. Gen. Robert H. Chamberlain, former sheriff of Worcester County, at his home, 3 Oberlin Street, of illness following paralysis. He was 72 years and 12 days old.

July 3. Edwin T. Marble, president and treasurer of Curtis & Marble Machine Company, at his home, 986 Main Street.

5. Wright S. Prior, former street commissioner, at age of 12 years in Denver, Colo., of appendicitis.

6. Edward B. Dolliver, treasurer of Standard Screw Company, president Arcade Malleable Iron Company, manager Worcester Machine Screw Company, of peritonitis, at his home, 5 Marble Street. His age was 61 years, 10 months and 5 days.

8. Enoch H. Towne, 76 years and 3 months, former city clerk, in the home of his son, W. Henry Towne, 3 Shepard Street.

15. Edwin P. Woodward, lacking one day of 78 years, former Worcester merchant, at his home in Chatham, N. J., of apoplexy.

Lynn's Unusual Problem

Lynn, long the leading shoe city of the world, is suffering from an over-production of high-grade shoes. This has resulted in a great loss to the city, as the shoe factories are busy only about two-thirds of the year The Lynn Board of Trade is pushing a project to secure an agreement between the manufacturers and their employees which will permit of the making of cheaper grades of shoes in competition with outside manufacturers. It is advocated by the Board of Trade that this would be of material benefit to both manufacturers and employees, and that the factories would be kept busy the year around. The shoe industry in Lynn is strongly unionized, and the present rates of wages have driven the production of cheap and medium lines of shoes from the city. The Board is making a proposition to the manufacturers and labor unions to try the plan for one year, under the direction of a special committee of the organization.

WORCESTER BOARD OF TRADE

EACH FOR ALL ALL FOR EACH

11 FOSTER STREET
WORCESTER MASSACHUSETTS
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
CHARLES H. BOSWORTH, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MACGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: CHARLES L. GATES.
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

Linked to the Grand Trunk

Directors of the Worcester Board of Trade Would Like to See the City United to this Great Transcontinental Line. Other Business at July Meeting

Despite the intense heat of the month of July and the midsummer quietude that always characterizes the work of organizations of this type, the business of the Worcester Board of Trade demanded a July meeting this year, and it proved one of the most valuable recently held.

In the absence of the President, the Vice-president, Mr. E. M. Woodward, presided, and there were present of the directors Hon. Daniel E. Denny, Mr. Charles Perkins Adams, Mr. Albert H. Inman, Mr. Arthur O. Young and Mr. Charles E. Hildreth.

A report was received from the Committee on Agriculture recommending the passage of a resolution endorsing the Weeks bill, so called, to provide for the creation of a forest reserve in the White Mountains, and also recommending that this Board make a donation of $25 to the treasury of the American Forestry Association, which is agitating the passage of this bill. The directors approved of the recommendations and voted to appropriate the amount in question.

A communication was read from Addison B. Burk, secretary-treasurer of the Atlantic Deeper Waterways Association, inviting this organization to join the Association and participate in its convention at Providence Aug. 31 and Sept. 1, 2 and 3. It was voted to unite with the Association and to empower the President to apoint the eight delegates to which this Board is entitled, in accordance with the membership fee. An appropriation of $40 was voted for the purpose of paying the admission fee to said Association.

While Worcester is not situated on any waterway, and there is little probability of canals being built to this city from tide-water either at Providence or Norwich, it is impossible for New England to profit from the deepening of the waterways and building canals along this coast without this city materially benefitting from the lowered freight rates to the southward that must necessarily ensue.

The promoters of this enterprise believe that marked reductions will be effected; for example, in the rates charged for shipping coal from the mines to Providence, and if so, Worcester must inevitably profit from the decrease.

The Boston Chamber of Commerce recently made an exhaustive investigation into the coal question as it applies to New England, in the course of which it found that the average cost of steam coal—bituminous—at the mouth of the mine for the five years, 1903-1908 inclusive, had been $1.13 per long ton in Pennsylvania; $1.31 in Maryland; $1.06 in West Virginia. The cost of trans-shipment from the mines by coal-barge and rail to Worcester is $3.21. The average cost of anthracite coal at the mines in Pennsylvania for the same period was $2.13 per ton of 2240 pounds. It will thus be seen that nearly three-fourths of the cost of all the coal laid down in Worcester goes into freight charges. If the Atlantic Deeper Waterways Association succeeds in reducing that one item of expense, it will justify its reason for existence.

A communication was read from the American Embassy Association of New York asking this Board to endorse the movement to secure the erection of residences abroad for our ambassadors to foreign courts, and the communication was referred to the Committee on Legislation. At the present time no nation on earth lodges its ministers in such abominable quarters as those assigned the paid representatives of the United States. With the single exception of the Embassy at Constantinople, this country has not in any great capital in Europe an official home owned by Uncle Sam. With the one exception of the Minister to the Ottoman Empire, every ambassador we have abroad lives in a hired house. A bill making a start in the direction of rectifying this conditon of things was introduced into the 61st Congress by Mr. Lowden. It called for a modest appropriation of $500,000, but failed of passage. It is to be reintroduced in the next Congress, and the American Embassy Association will endeavor to secure its enactment into law.

Invitation was received to send two delegates to the National Irrigation Congress at Pueblo, Col., Sept. 26-30, and the President was empowered to make such appointment.

A communication from F. R. Willey, representing the George R. Lawrence Company, asking the endorsement of this Board of an aerial photograph of Worcester, which he desires to take for commercial purposes, was referred to the Committee on Publication.

Under the head of unfinished business, the Secretary made a report on the status of the campaign for an increase in the rate charged for carrying the second class mail, recently investigated by a committee of this Board, and also made a report of progress on conditions at Lake Quinsigamond. This charming summer resort on the edge of the city has not of late received adequate police protection, but thanks to the activity of this Board, conditions there now show a marked improvement.

It was stated by the chairman, for the benefit of the Board, that a postponement had been secured of the time fixed for putting into effect in this territory of the uniform code of demurrage rules. The railroads have been anxious to reduce the free time for shippers to unload their consignments from 96 to 48 hours. The Vice-president of this Board and the chairman of the evening has been particularly active in opposition to imposing this additional hardship on our New England manufacturers, and it was particularly gratifying to him to be able to announce that the railroads had receded from their position of attempting to enforce this obnoxious rule.

Mr. Charles Perkins Adams moved, and it was so voted, that this Board take up with Mr. C. M. Hays, president of the Grand Trunk Railroad, the question of constructing a line from that road into Worcester, either directly or indirectly by a branch road from Palmer. The chairman of the Transportation Committee and the secretary having this matter in charge, have communicated with the authorities of the Grand Trunk and have been promised an opportunity to present the case for this city at an early date.

The resignation of Mr. Victor E. Edwards as a director on account of his removal to West Boylston to reside, was received and accepted with regret.

Adjournment followed.

Springfield in Line

Mr. Charles H. Bosworth, advertising manager of the Worcester Magazine for the past two years and a half, leaves on Aug. 15 for Springfield, where he will enter upon a similar work in connection with the Springfield Board of Trade.

The Springfield Board of Trade for more than a year has discussed various forms of publicity, and after a thorough survey of the whole field of effort has finally decided that there is nothing comparable with a monthly magazine to get a town on the map and keep it there.

In this respect they are following in the footsteps not only of Worcester, but of Dayton, O.; of Providence, R. I.; of Portland, Me.; of Scranton and Wilkesbarre, Penn.; of Cincinnati, and of Boston, all of which issue first-class monthly publications devoted to the work of the organizations that print them, and to civic development generally.

In Springfield the magazine will be assured of a hearty welcome, and as it is to cover not only Springfield, but other cities and towns in the western part of the State, it ought to have a large and lucrative field in which to operate.

Mr. Bosworth has done splendid work in connection with the Worcester Magazine, and the best wishes of his colleagues and of the public generally will go with him into his new field.

The Year Book of 1910

The annual year book of the Worcester Board of Trade, containing the names of the members of this organization up to Aug. 1, a list of the presidents and directors from 1891 to 1911, the officers and committees for the current year, and the constitution and by-laws, is just going to press. An edition of 1500 copies of this year book will be published in order that the members of the Board may all have one, and that the office itself may be equipped to answer any future demand that may be made upon it.

The edition of 1909 is totally exhausted, and it is believed that the demand for the year book of this year will be even greater than that of one year ago.

This year book has been very carefully edited, and as it gives the names, occupations and business addresses of more than 800 of the leading business and professional men of this city, it cannot fail to be of great value to the members and to the public generally.

By Aug. 15 it ought to be in the hands of every member of this Board. If, for any reason, a member does not receive a copy, or if, for any purpose, he desires an extra copy, the Secretary will be very glad to accommodate him if he will communicate with this office.

Spasmodic Activity

That the activities of commercial organizations are not always wisely directed is the lesson drawn by the Burlington (Ia.) Hawkeye in the following editorial:

"There is talk of reorganizing the Eldora Commercial Club. The trouble with so many of these organizations seems to be that after a spasm of great activity they go to sleep. There is an attempt to do too much at once, and to do things that are impossible, and then when the inevitable snag is struck, a feeling of profound disgust prevails, and there is nothing doing at headquarters until another reorganization takes place. The majority does the things which are near at hand and which can be done, and is forever on the job and proves a real blessing to the community, while some of these organizations prove a positive detriment to the towns whose interests they are supposed to promote."

A Sensible Appeal

A letter in the Kansas City (Mo.) Star, in which a stirring plea is made for better support of local industries, contains these words:

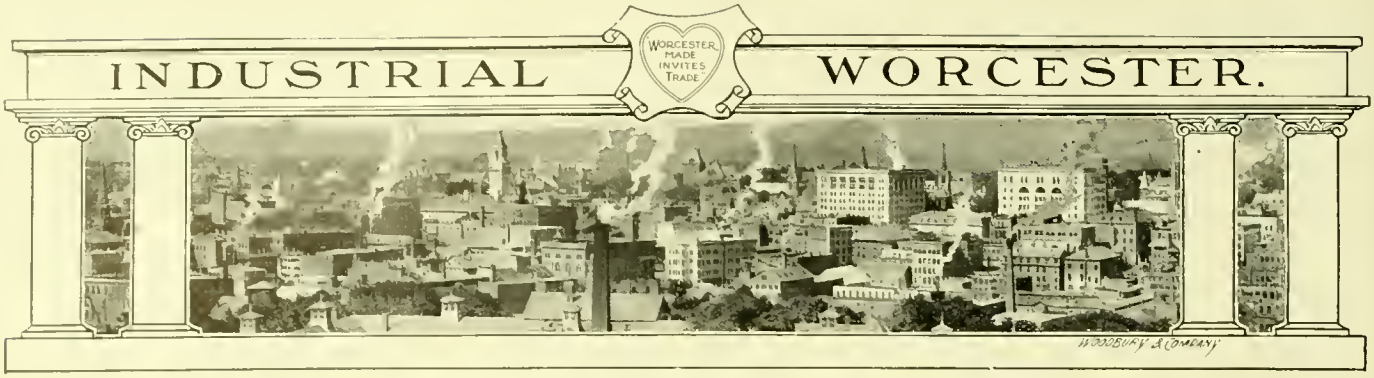
"Every manufacturing industry is a producer, a supporter, an upbuilder of our city, and factories are good investments; they make money for their stockholders, and they make more general prosperity and a greater volume of trade for a city than can be developed through any other form of commercial effort. And in turn, the factory benefits the banker, the real estate speculator and the merchant. Every truly great city in the United States not a seaport owes its greatness to its manufacturing industries. Then let our sound business men investigate and invest in the factories already here."

New Bedford's Loss

The William Whitman interests had planned to erect a million dollar merino mill in New Bedford, but a legal tangle involving a right of way caused the abandonment of the plan. Mr. Whitman has, according to press reports, definitely decided to build in Lawrence, and the work of construction will be started soon. Lawrence is correspondingly elated.

Vacancy at Annapolis

A preliminary competitive examination of candidates for appointment to Annapolis Naval Academy will be held in Worcester some time during next January. Congressman Washburn requests that all prospective candidates communicate with him for full particulars.



The Osgood Bradley Car Company

The big plant of the Osgood Bradley Car Company is shown in the illustration below. As an example of New England hustle and rapid but substantial growth, the record of the construction of this plant makes interesting reading.

The first ground was broken October 12 of last year, and in a little less than eight months—June 10, to be exact—the first car was turned out.

The site selected for the erection of this group of workshops was wisely chosen. The standing timber on the fifty-three acres included in the purchase furnished more than enough posts for the mile and three-fourths of fence, nine feet high, which surrounds the plant. A major part of the materials used in the buildings is concrete, and the needed sand and gravel were found ready at hand on the tract. The full description of these buildings will be found in the April number of this Magazine.

In the completed plant lockers are provided for the use of employees, and all the toilet and sanitary equipment is of approved design. Hot and cold water is provided, with ample washing facilities for the large number of employees, consisting at present of 750 men, and soon to be greatly increased.

An intercommunicating telephone system with 36 stations reaches every department. The head of the concern, John E. Bradley, states that the plant, though already of gigantic size, has been designed with a view to allowing sufficient space for the enlargement of any or all departments when necessary. He also expresses the belief that while the plant is not the largest, it is the most complete car works in the country.

A track system is being extended to encircle the entire plant, and a track scale for weighing car loads is already in place. The company has its own locomotive and keeps it busy.

A large amount of filling was completed before the erection of the buildings, but the work will continue until about 20,000 cubic yards more have been placed in position.

A 12-inch water main extends the entire length of the tract, and crowning the network of lateral mains are 13 hydrants. Through the buildings 8-inch mains are laid and at every 40 feet are 3-inch standpipes with 200 feet of hose attached. A corps of employees is trained as fire-fighters, and the company carries its own insurance, believing that the system of safe-

PHOTO BY CARLTON

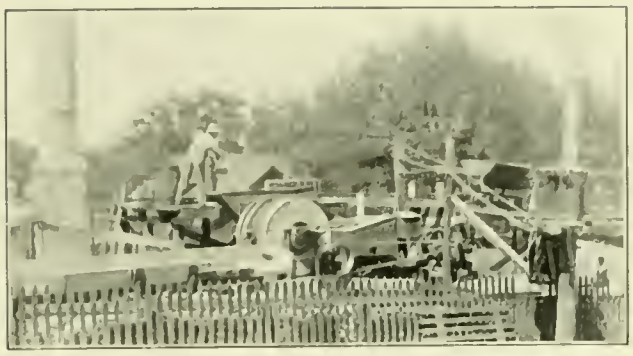
OFFICE

POWER HOUSE—REAR
ELECTRIC CAR PAINT SHOP

THE OSGOOD BRADLEY

guards and the practically fireproof construction of the buildings afford sufficient protection.

Some idea of the magnitude of this industry can be gained when it is learned that 140,000 feet of lumber go through the dry house every two weeks, and that over 1000 bales of shavings are already stored in the lower part of the yard, although the wood working department has been in operation only a few weeks. The winter demand upon the 1325 horse-power capacity of the boilers will consume the summer surplus of shavings in short order. The full capacity of the boilers is needed only in zero weather, as the power used in operating the plant is electricity, furnished by the Connecticut River Power & Transmission Co.



CONCRETE MIXING AT NEW ELECTRIC PLANT

The capacity is about four times that of the old plant, and there is also ample room for storage of materials. The output when running with a full force of employees will be two electric and one passenger car each day. It is expected that this output will be reached in a few months.

The office force has been largely increased and the building erected for their use is almost palatial in its finish and equipment. Situated on Mountain Street on the highest part of the tract, its windows command a view of every building and the whole extent of the yard.

Worcester Electric Light Company

The construction of the new $600,000 plant of the Worcester Electric Light Co., on Webster Street near Curtis Pond, is attracting a great deal of interest, especially the two concrete stacks which are growing at the rate of five feet each day toward their destined height of 175 feet.

The building is to be of the mission type, 140 by 80 feet, and 65 feet high, with stucco exterior. The foundations are of reinforced concrete. The floors will be of reinforced concrete on steel, and the roof frame and supporting structure of structural steel. The roof itself will be of slate.

The front of the building will have two floors to contain the offices and switchboards.

The foundation of the stacks rests on a bed of gravel underlying a bed of quicksand. The tapering stacks are being built by the use of special movable forms of iron, and each is reinforced with 15 tons of steel.

Flues 8 by 10 feet in size enter these stacks from the boilers. Increased draft is secured by the use of three Sturtevant multivane fans driven by three 8 by 9 inch vertical single engines.

Two hundred and fifty tons of coal will be stored in a coal pocket directly over the boilers, and the mechanical stokers will be fed by gravity. There will also be storage space for 3000 to 5000 tons of coal in the rear of the building. All coal and ashes will be handled with mechanical apparatus.

Six Sterling water tube boilers will furnish 3612 horse-power. These will be equipped with superheaters and will have each 6019 square feet of effective heating surface. They are designed to operate at 200 pounds gauge pressure, with 100° F. superheat. These boilers will be fed by six Taylor 7 retort mechanical stokers. The plans show an intricate and interesting system of steam piping throughout the building.

The condensing system will consist of three Wheeler outfits. Each of these will include a horizontal rectangular jet condenser, a 9 by 22 by 12 inch rotative dry vacuum pump, and a 12-inch centrifugal pump mounted on a common base, with and

MAIN BAY ERECTING SHOP
NORTH BAY HEAVY WOODWORKING AND CABINET SHOPS
CAR COMPANY, GREENDALE

MECHANICAL ROW
SOUTH BAY BLACKSMITH AND MACHINE SHOPS
STOREROOM AND TRUCK SHOP

PASSENGER CAR PAINT SHOP
TRANSFER TABLES

FIRST FACTORY AT BARBER'S CROSSING, WORCESTER

FIRST SHOP--WATER STREET, WORCESTER

DEUTSCHE NORTON GESELLSCHAFT M.B.H., WESSELING, GERMANY

NIAGARA FALLS PLANT FOR MANUFACTURE OF ALUNDUM

GRINDING WHEEL PLANT—1910—WORCESTER

CHIPPAWA PLANT FOR THE MANUFACTURE OF NORTON CARBORUNDUM

PIKE MANUFACTURING COMPANY, LITTLETON, N. H.

EVANSVILLE, VT.

PIKE, N. H.

NORTON COMPANY PLANTS.

driven by a 50 horse power Kerr steam turbine. Each outfit is designed to condense 33,600 pounds of steam per hour when supplied with cooling water at 70 degrees, and to maintain a 28-inch vacuum. It is estimated that the steam consumption of the auxiliaries alone will be from 3000 to 4000 pounds per hour when operating under 175 pounds of steam and 100 degrees superheat.

The water for condensers and boiler feed will be supplied from Curtis Pond through 300 feet of underground flume. After passing through the condensers, the water will be returned to the pond, thus obviating any waste.

The generators will be driven by three 2000 K. W. Westinghouse Parsons multiple expansion, parallel double flow steam turbines. There will also be two exciter unit turbines.

The generators will include three Westinghouse 2500 K. V. A., 2000 K. W. at 80% power factor, 3 phase, 60-cycle, 2400 volts, 3600 r. p. m., revolving field, alternating current generators, and two exciter generators.

The switching equipment will be wholly furnished by the General Electric Company, but is too complex to describe in detail.

A special feature of the process of construction is the time and labor saving system of concrete mixing, shown in accompanying illustration, which was devised and installed by Superintendent Shaw.

The work of construction was started June 2 and it is planned to have one generator in use by the middle of October.

The plant is being built and equipped by Westinghouse, Church, Kerr & Co. of New York. A. W. Chapman is engineer in charge, Samuel Shaw, superintendent and George W. Burpee, assistant superintendent.

Many Worcester industries are turning to the use of electric power, and the completion of this power house will put the Worcester Electric Light Company in a position to meet the demand that has pushed the old plant to its greatest capacity. The present power-house will be continued in use and the city will have a greatly increased supply of electric energy as the result of the enterprise of this locally-owned and managed company.

Norton Company

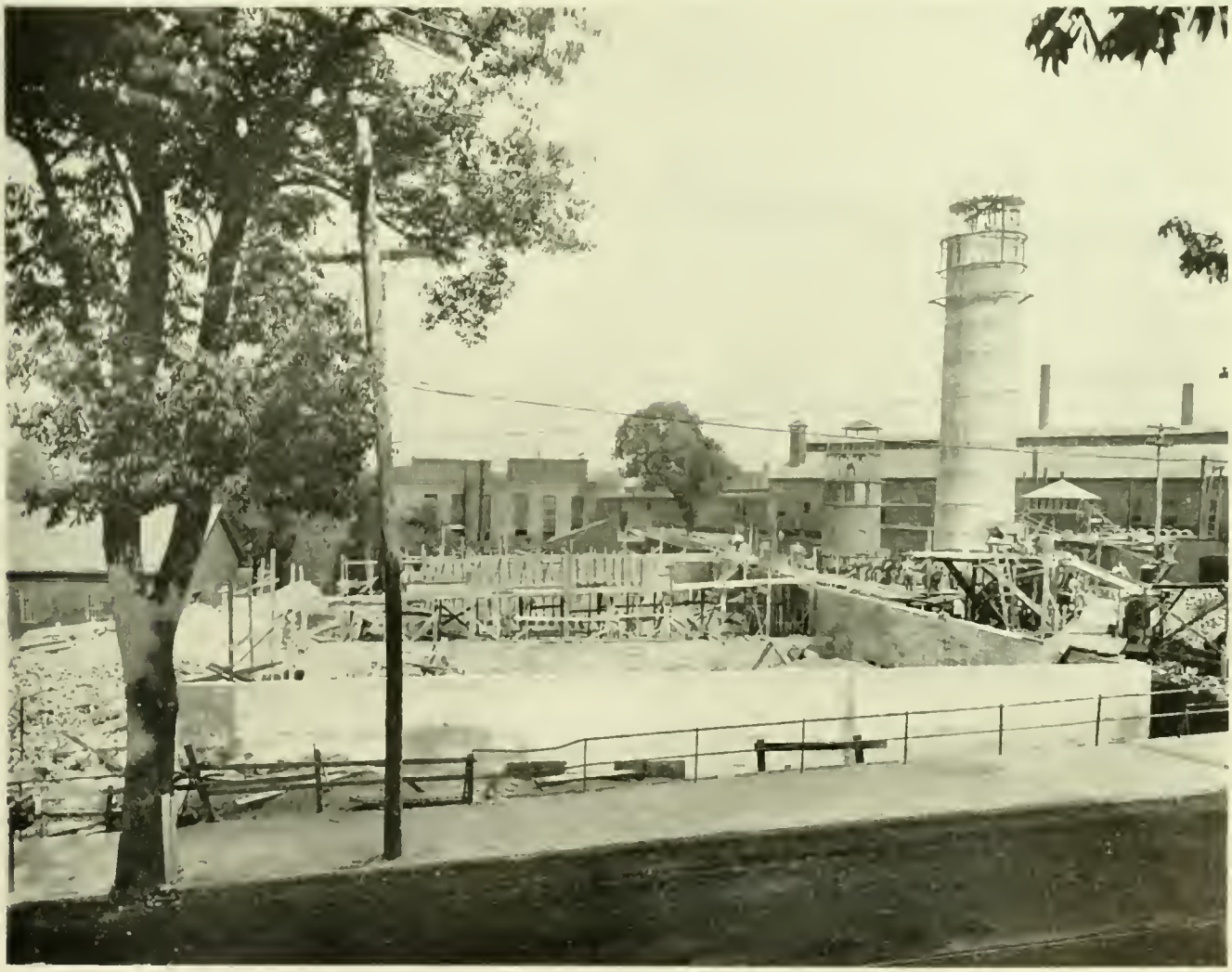
The group picture on the opposite page shows twenty-five years' growth of the grinding wheel works of the Norton Company.

In 1885 the floor space occupied was 560 square feet; horse power used, 15; workmen employed, about a dozen.

The first factory at Barber's, built in 1886, was a two-story building about 48 x 120 feet. Only part of this factory was needed for manufacturing grinding wheels, but the demand for Norton products soon exceeded the capacity, and the plant has shown a continuous growth between the years 1886 and 1910. An idea of the extent of this growth may be had by referring to the group picture, which shows the factories in 1885 and 1886, and the plant to-day. With the exception of two buildings used for the manufacture of Norton grinding machines, the entire Worcester plant is used for the preparation of alundum and its manufacture into Norton products.

The Norton Company's Niagara Falls plant is the only one in the world for the manufacture of alundum. The original building was constructed in 1901. Large extensions were made in 1905 and 1906 when alundum superseded emery as the abrasive used in the manufacture of Norton grinding wheels, and when the name of the company was changed from Norton Emery Wheel Company to Norton Company.

The total production of alundum in 1901 was 200,000 pounds. In 1909 it was 13,578,000 pounds. This fact in itself furnishes proof of the increasing popularity of alundum as an abrasive, or grit, for the manufacture of grinding wheels, sharpening stones, and for polishing purposes. The alundum plant is operated



Construction Work on Plant of Worcester Electric Light Company

PLANT OF WORCESTER PRESSED STEEL COMPANY

twenty-four hours a day. The company claims that Norton grinding-wheels made of alundum successfully grind more kinds of metal, under a wider range of conditions, than those made of any other abrasive, natural or artificial.

A new plant at Chippawa, Canada, for the manufacture of Norton carbondum will be completed and in operation within a short time.

In order satisfactorily to serve and increase the foreign trade, a model manufacturing plant has been erected at Wesseling, near Koln, Germany. Greatest care and study have been given to the design and arrangement of the Wesseling factory, with the result that it is complete and up-to-date in every respect. This was put in operation July 5th, 1910.

A number of experienced workmen have been transferred from the Worcester plant to Wesseling, and will remain there until the successful manufacture of Norton products is well established.

On Jan. 13, 1910, the Norton Company acquired an interest in the business of the Pike Manufacturing Company, who, since 1901, have acted as selling agents for India oil stones, manufactured at the Worcester plant. The Pike Manufacturing Company were the pioneers in the production of all kinds of natural stones, and have always been noted for the high quality of their product. For four generations their goods have been as household words in all quarters of the globe.

The executive offices are located at Pike, N. H., and the manufacturing plants at Pike and Littleton, N. H., and Evansville, Vt. A branch sales office is maintained at 151 Chambers Street, New York. The quarries of the company are located at Pike, N. H.; Evansville, Vt.; Orleans, Ind., and Hot Springs, Ark.

The closer association of these two companies, both of whose products are included in abrasive lines, cannot fail to prove beneficial for all interested.

Worcester Pressed Steel Company

The Worcester Pressed Steel Company has enlarged its floor space to meet the demands of its increasing business by the addition to its plant of the building shown on the right side of the illustration on this page.

This business was established in 1883 by Edmund Converse, under the name of the Worcester Ferrule & Manufacturing Co. The first plant was at 17 Hermon Street, and used 8,000 feet of floor space, the employees numbering twenty. In 1894 larger quarters were secured at 100 Beacon Street.

At first the products of the company were confined largely to stove trimmings, pipe collars and ferrules. Later it became the pioneer in the manufacture of pressed steel bicycle frame fittings and pressed steel ball cups. In 1904 the old company was succeeded by the Worcester Pressed Steel Co., incorporated in Massachusetts, of which Milton P. Higgins was president, George I. Alden treasurer, and John W. Higgins secretary and general manager. In the same year (1904), a new department was added for nickel plating, polishing and buffing.

The following year six acres of land were purchased on the Boston & Maine R.R., near Barber's Crossing, Greendale, and the present main building was erected and a beginning made on the present extensive line of automobile, motorcycle, cream separator, textile and electrical fittings.

In 1906 the first autogenous welding plant made in this country was installed.

In 1908 a department for cold rolling strip steel was organized and a rolling mill for this purpose installed.

Last year there was added to the plant a steel and concrete building for the annealing and case-hardening departments, the equipment including an annealing furnace, claimed by the company to be the largest in this section of the country. The building just completed will be devoted to shipping and storage. The company announces that it will add this fall a separate steel building for a foundry, which will have a special cupola for die castings. The present floor space is 55,000 square feet.

Important additions now being made to the factory equipment include three new presses, a crane for the annealing shop, and a new pickling plant in a separate building for use in conjunction with the rolling mill.

Last month was a record month for production, and it is estimated that this year's sales will run close to a half-million dollars.

This spring the Worcester Pressed Steel Pulley Company was incorporated under Massachusetts laws. The new company is controlled by the Worcester Pressed Steel Co., and will handle pressed steel pulleys made under new patents. This new pulley will be protected here and in five foreign countries by several strong patents. As soon as all these patents are secured, this new Worcester product, which contains neither bolts nor rivets, will be described at length in this Magazine. Five hundred of the first size (6 by 3 inches) have been manufactured, and are being placed on the market.

The WORCESTER MAGAZINE Illustrated

SIX THOUSAND CHILDREN AT THE TAILLTENN GAMES.

SEPTEMBER, 1910

$1.50 per year

Published by the Worcester Board of Trade

WORCESTER, MASS., U. S. A.

15 cents the copy

Central Supply Company

HEATING DEPARTMENT

All the leading makes of Steam and Hot Water Heaters, Worcester Furnaces, etc.

High and Low Pressure Steam and Water Supplies

For private residences, manufacturing plants, railroads and villages

Wind Mills, Hot Air Engines, Tanks, Towers, Pipe, Hose, etc., etc.
Steam and Hot Water Heaters and Radiators

Drop a postal, or telephone, and our representative will call on you.
Send for catalogue

A visit to our warerooms will repay any intending purchaser

Telephone 4440

Foster, Commercial and Mercantile Streets Worcester, Mass.

THE WYMAN & GORDON Co.
DROP FORGED CRANK SHAFTS

Are Made for
ALL SIZES
of engines
They have proved
RELIABLE
STRONG
TOUGH
TRUE
We make them for the Prominent Motor Manufacturers

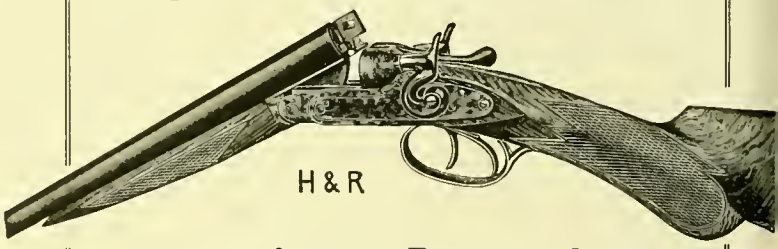
THE WYMAN & GORDON CO.
WORCESTER, MASS., CLEVELAND, OHIO.

TRADE

Established 1871 — **Incorporated 1888**

H & R ARMS CO. MARK

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. SEPTEMBER, 1910 No. 9

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Edwin N. Benchley, Advertising Manager.

CONTENTS

THE TAHLTENN GAMES AT FITTON FIELD—Six Thousand Children from Twenty Worcester Playgrounds Present a Brilliant Spectacle, 243-246

FARMING FOR QUALITY—AND QUANTITY—An Interview with L. B. Clore, the Manager of the New England Corn Exposition, 247-248

ST. JOHN'S CHURCH, WORCESTER—The History of the First Catholic Parish in the Diocese of Springfield, 249-253

EDITORIAL REFLECTIONS, 254-255
The Lesson of Fitton Field.
The Corn Show.
The Landing of the Pilgrims.
Good Candy.

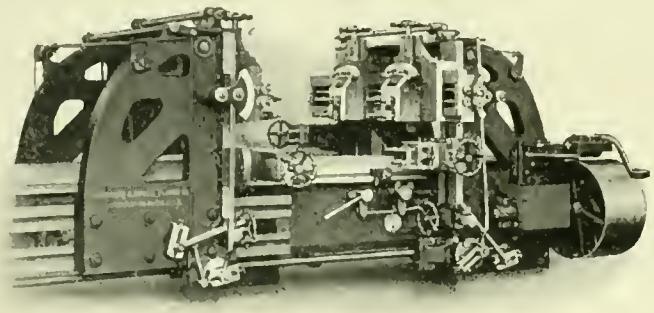
DEPARTMENTS, 256-257

WORCESTER MUSIC FESTIVAL, 258

BOARD OF TRADE COMMENT, 259-261

INDUSTRIAL NOTES, 262-267

ESTABLISHED IN 1887



PLANERS

24″ x 24″—27″ x 27″—30″ x 30″—36″ x 36″
42″ x 42″—54″ x 54″—60″ x 60″.
Any length.

Textile Feed Roll Fluting Planers. Frog and Crossing and Switch Point Planers. Locomotive Connecting Rod Planers, 48″ x 17″ x 16″ Duplex Planers, cutting a full stroke both ways, 46″ x 18″ any length.

Manufactured by

Woodward & Powell Planer Co., Worcester, Mass.

Selling Agents: Manning, Maxwell & Moore, New York City, Philadelphia, Chicago, Ill., Seattle, Wash., Portland, Oregon, Milwaukee, Wis., St. Louis, Mo., Pittsburg, Pa., Cleveland, Ohio, Boston, Mass., Birmingham, Ala., Mexico City, Mexico, Tokio, Japan, Canton and Hongkong, China. Henshaw, Bulkley & Co., San Francisco and Los Angeles, Cal. Fenwick Freres & Co., Paris, France, Belgium, Italy, Switzerland and Spain. Herman Haelbig, Dresden-A 3, Germany and Austria.

Does Five Times as Much Work as Could be Done in the Old Way.

The Heald Machine Co., Worcester, Mass.

Gentlemen:—We have been using one of your "American Sash Trimmers" constantly for the last two and a half years, and are perfectly satisfied with its work.

It is a great labor saver, doing five times as much work as could be done in the old way, and doing it cleaner and better.

Yours very truly, Mohawk Valley Lbr. Co., Fultonville, N. Y.

The letter only tells of entire satisfaction. It would take pages to tell of the many details of satisfaction this machine offers.

A 30 Days' Free Trial

brings out all of these points. Just send us sample of your sash bar. We'll make up a set of special cutters and bed pieces to match. The machine will then be shipped you for thirty days' trial—no strings attached. All we ask is an opportunity to show you.

Heald Machine Co. Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Here's your chance to try the

Coates Flexible Shaft

Opportunity is knocking now at the door of your shop.

With a **COATES** Outfit you can do the work right in position. The Coates is the flexible shaft that transmits full power forward or backward.

Save time, money and trouble on such work as **Drilling, Grinding** or **Polishing.** You're going to unnecessary expense when you tear down the machine and cart the pieces to the drill press or lathe.

Get our Bulletin W.

COATES CLIPPER MFG. CO.
Worcester, Mass.

HOWARD-WESSON-CO.

4 WALNUT STREET
WORCESTER

Successors to the
ART and HALF-TONE
Departments of
WOODBURY & CO.

ORIGINAL DESIGNS and Ideas for Advertising

HALF-TONE ENGRAVING Duotones 3 and 4 color plates

PHOTOGRAPHS of MACHINES, VIEWS and Manufactured products

UNSOLICITED TESTIMONIALS
From Leading Publishers, Printers, Advertising Men and Manufacturers Prove that the Designs and Engravings made by

HOWARD-WESSON-COMPANY

are original and attractive with right Printing Qualities and excellent selling values.

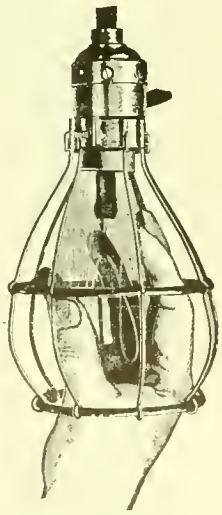
May we interest you in new designs and engravings?

MADE IN WORCESTER HOWARD WESSON CO.

Always at your service
Telephones
2670-2671

ELECTRIC LAMP GUARDS

A SAVER



RETINNED

No. 201, Length over all, 5½ inches.

Extra Heavy With Clamp Screw

The lamp can be removed and a new one substituted without removing the guard, which makes it especially suitable for general factory use, electric railway car houses and kindred places, where it is desirable to use an electric lamp on a flexible cord, so that it may be brought to the work wherever desired.

One-twelfth gross in a box.

TIME LAMPS MONEY

THE WIRE GOODS COMPANY

WORCESTER, MASSACHUSETTS

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

The Tailltenn Games at Fitton Field

Six Thousand Children from Twenty Worcester Playgrounds Present a Brilliant Spectacle and Win the Commendation of Thousands of Spectators. Brief Mention of Features, New to Playground Work, Which Are Proving Succesful

OFTTIMES the purple of Holy Cross and the colors of its adversary have made gay the stands of Fitton Field, but when, on Aug. 24, over six thousand children, bearing the distinctive colors of the twenty playgrounds, which the generosity of our citizens, banded together under the name of the Worcester Playground Association, has provided, marched from the heights of Mt. St. James and countermarched until the wide expanse of the field was covered with rank upon rank of the youthful paraders, it seemed that all the colors of the spectrum had been borrowed to make the occasion glorious.

For over a mile the lines extended and when the happy and eager faces of the marching throng passed in review, the assembled thousands who had come to see and be entertained received a forceful lesson of the importance of the playground movement and a wider conception of the usefulness and necessity of trained supervision of the activities of these restless little minds and bodies. As an impressive spectacle, its like has rarely been seen in Worcester, and a visitor from one of the states of the Middle West rushed up to the photographer, exclaiming, "Give me your card, please! I want some of the pictures! In all my wide travels, I never saw anything like this!" This, in substance, was the tone of all the comment heard throughout an assemblage that filled all the stands and overflowed the hillsides which looked down upon the arena.

Following the grand march, the children were massed by playground groups in front of the stands, the girls to the fore.

Miss Frances Healey, the supervisor of folk dancing, ascended an elevated stand facing the children, and directed the calisthenic drill which was the next number of the programme. Thousands of arms and bodies swayed in unison, and the sight from the stands as this army of pupils went through the movements was an attractive illustration of the thoroughness of the lessons of the previous six weeks.

Weekly Play Picnic

One of the Folk Dances

Calisthenics

Then groups of girls moved forward and the first exhibitions of folk dances commenced. Here the spectators—contrary to the plans of the directors—had a chance to see the playground work under actual working conditions, for a host of exuberant urchins broke from the restraining ranks in the rear, and surrounded the dancers until the yellow-ribboned officials and the squad of police were forced to take a hand and "shoo" them back to their places.

Volley Ball

Girls' Race

Water Crowd Ball

Music for the dances was furnished by the Worcester Brass Band, at times directed by Mrs. Robert Taft, who has played for the folk dances at the playgrounds, and the combination of music, life and color—in effect resembling a flight of white butterflies with rainbow-hued wings flitting over the greensward—held the closest attention of of the assemblage through the eight numbers of this portion of the programme. The titles of these dances were: Swedish clap dance, pop-goes-the-weasel, English dance, reel o' Tulloch, How do you do? Hungarian, Irish jig, and bean porridge hot. The reel o' Tulloch, given by a bevy of little girls in Highland costume, and the Hungarian dance, in which the little participants were clothed in the brilliant red and green costume of the country with multi-colored turbans on their heads, were received with the greatest acclaim, though all the numbers won well-merited applause.

The boys furnished an exhibition of volley ball, in which four games were in progress at once between teams from eight of the playgrounds. Another amusing portion of the work done by the boys was a hurry-skurry affair called a "shoot the chutes relay race," in which teams from four playgrounds competed. As a means of developing activity this contest is surely a success. Several races had been arranged for the boys, but the unexpectedly large attendance compelled the postponement of these features to an athletic meet to be held later. The games were shortened to this extent by request of officials of the street railway company, who notified the directors that otherwise the special cars could not get the children home in time for supper.

Boys in Costumes of "Robin Hood"

The show event of the day was the flag drill and the salute to the flag. Girls from all the playground groups were in this drill. Each had two flags, in either hand, and when little Rose Stone of the Ledge street school, costumed as Miss Columbia and accompanied by one of the larger boys carrying a large United States flag, stood before the centre of the line, four thousand flags raised on high made an inspiring sight.

The closing feature of the afternoon was the carrousel, in which the whirling rings of white-clad girls formed a pleasing picture of childish play and abandon.

Then the six thousand children were marched by their teachers to the waiting cars, and the assemblage of seven thousand spectators broke up, part to catch early cars for home, while other thousands flocked to the tent containing specimens of the industrial work of the play-grounds.

Here was to be seen a truly wonderful exhibit of articles made by the deft fingers of the little ones. Samples of sewing by hand and machine filled one end of the

GEORGE F. BOOTH
President of Worcester Playground Association

tent, and naught but the most favorable comment was heard as the surprised visitors inspected hundreds of articles intended for attire or household use. Basketry, raffia, brass and shoestring work filled the remaining space, all demonstrating skill which gave little hint of the youthfulness of the makers.

The first annual Tailltenn games of the Worcester Playground Association speak volumes for the efficiency of the executive committee in charge, which consisted of George F. Booth, president; Donald B. Logan, treasurer; John F. McGrath, secretary; Rev. Dr. John J. McCoy, Louis H. Buckley; Emmett D. Angell, supervisor, and W. Francis Hyde, general assistant.

The active work of the playgrounds is under the charge of Emmett Dunn Angell, supervisor. Years of experience acquired as an instructor in the department of physical education of the University of Wisconsin, instructor of games in the Harvard Summer School of physical training and similar work at Yale, and as the head of the department of physical education at the Oregon Agricultural College, together with previous experience as a playground director, have made his work as supervisor a success.

Mr. Angell possesses a personality which attracts the boys and girls, and an inventive talent which has added a large number to the games played wherever playgrounds have been established. He is also the author of "Play," a widely-known book on playground methods.

W. Francis Hyde, general assistant, was one of the prime movers in the formation of the Association. All the work work of equipping the playgrounds has been done under his direction. A natural liking for the work and a thorough understanding of the problems associated with boy life and play, make him well equipped for the position he fills.

The success attending the work of the other assistants was well shown at the Tailltenn games. These are Miss Frances Healey, supervisor of folk dancing; Miss Gertrude T. Killian, supervisor of raffia and basketry; Miss Ellen C. Murphy, supervisor of sewing; and Miss Ellen C. Moynihan and Mrs. Emelyn N. Partridge, story tellers. The part played by the forty-nine assistants, six of whom are volunteers, is well illustrated by the comment of Thomas Curley, Boston, of the Civic League: "Among the many playgrounds I have visited, nowhere have I seen the true playground spirit so well exemplified as by the teachers and children of Worcester."

A district nurse spends every day among the playgrounds, dropping here and there words of helpful instruction, and sending to physicians the occasional cases which need skilled medical attendance. The Public Library co-operates with the Association, and attendants are sent to several playgrounds to establish temporary branch libraries and to assist in the story telling.

Supervisor Angell states that several features employed this year are new to playground work. A piano carried from one playground to another in a wagon and used to furnish music for folk dances is one.

Five thousand printed slips bearing songs, some the words of popular songs of the day, and others parodies written by various teachers, were distributed among the children. One does not readily forget the effect when six or seven hundred childish voices join in a song like the one below, with

A STORY TELLING CLUB

EMMETT D. ANGELL
Supervisor

all the swing and spirit of a southern camp-meeting.

PLAYGROUND SONG

To the tune of "Dixie Land"

1 Then come away to our fine old playground!
There we play ev'ry game that's found,
Come away! come away! come away! Come and play!
We have swings, and slides, and teeter-boards,
We have volley-ball to play in hordes,
Come away! come away! come away! Come and play!

Chorus:
Let us shout aloud and cheer them, Hooray! Hooray!
No matter, boys, how loud the noise. Just cheer and cheer
for playgrounds.
Hooray! hooray! hooray! for Worcester Playgrounds!
Hooray! hooray! hooray! for Worcester Playgrounds!

2 If your mind is bent on work that's play too,
Others there will do what you do,
Come away! come away! come away! Come and play!
You may weave, or sew, or dance, or sing,
You may stories hear. They're just the thing!
Come away! come away! come away! Come and play!

Still another new feature is the plan of holding weekly play picnics, when the children of several playgrounds are invited to some central one, and the occasion made enjoyable and attractive to the greatest possible degree.

A novel idea found in but few cities is the formation of story clubs, which meet daily and where, in the absence of a regular story teller, various members tell the stories. They have a president, vice-president and secretary, and a daily record is kept of the attendance, stories told and the ones who tell them.

Other unusual recreations, due to the fact that many Worcester playgrounds have wading pools, are water games. Sometimes one can see a game of "water crowd ball" with from one to three hundred participating.

In the industrial work the aim is to have every article of some practical utility. Emphasis is laid on this feature. That it is unusual is shown by the surprised and favorable comment of visitors who are well versed in the playground work of other cities.

The playgrounds in four of the most congested districts were selected as industrial centers where every day special teachers take charge of large classes in raffia, basketry, brass work, cane seating and sewing. From the start the instruction proved especially attractive to hundreds of Worcester boys and girls, the training of many little minds and hands has gone on apace.

W. FRANCIS HYLE
General Assistant

Work in raffia has been taught in all the playgrounds, and each one had a part in the making of costumes worn in the games.

A recent tour of several of the playgrounds revealed the interest the children have in them and showed how varied are the means employed for their entertainment and instruction. In one place a little group of girls are gathered about a teacher working in raffia. Under a group of trees are a score or more practicing a folk dance. Over yonder are three diamonds, where different ages of boys are absorbed in baseball. On top of a little knoll a lively game of basketball is in progress. In other places tennis, volley-ball, story-telling and varied games have their bands of devotees.

And this is only the beginning! The lessons of courtesy, fair play and clean speech unconsciously learned here during their formative years will become the foundation of the more perfect manhood and womanhood of the future Worcester citizens.

STRADDLE CIRCLE BALL

Farming for Quality — and Quantity

An Editorial Interview with Leonard B. Clore, Resident Manager of the New England Corn Exposition, Who Tells How New England Agriculture Will Benefit from the Formation of this Association

KEEN interest is being shown in the New England Corn Exposition to be held at Worcester, Nov. 7 to 12. This, the first Corn Show ever held in the East, is receiving the cordial and active support of leading agriculturists from every New England state, and the influence of agricultural colleges and societies, granges and commercial bodies is being exerted in a concerted effort to make this the most successful gathering of farmers for educational purposes that New England has ever seen.

From Franklin, Indiana, in the famous Johnson County corn belt, has come Leonard B. Clore, a director in the National Corn Association, and superintendent of a staff of more than fifty judges at the last National Corn Exposition of that body at Omaha, where there were 20,000 exhibits competing for prizes aggregating $50,000. This typical Hoosier hustler talks entertainingly of the aims of the New England Corn Exposition and the benefits which will accrue to this section from it:

"That there is need of awakening interest among New England farmers is shown by figures taken from reports of the United States Department of Agriculture. In 1908, the farmers of these six states planted 217,000 acres of corn and raised 8,800,000 bushels. On a basis of sixty cents per bushel, an increase of ten bushels per acre would give them $1,302,000 increased revenue, and only one bushel per acre would add $130,200 to their income.

"The statistical abstract of the United States for 1909 shows that the percentage of farm land improved in Connecticut fell from 66.9 per cent. in 1880 to 46 per cent. in 1900. In Maine it fell from 53.2 in 1880 to 37.9 in 1900. In Massachusetts it fell from 63.4 in 1880 to 41.1 in 1900. In Vermont it fell from 67.5 to 45. In Rhode Island it fell from 58 to 41.1, and in New Hampshire in the same period it fell from 62 to 29.8.

"The exposition method of arousing the farmer is made interesting by the number and variety of corn, grain and grass exhibits, and by the artistic decorations made wholly of such products. The corn show is made instructive by lectures on vital agricultural topics and problems, given by speakers who are acknowledged experts in special lines; by demonstrations of the way in which corn is utilized; and by the exhibits of the work of the State agricultural colleges, in charge of instructors who are eager to explain them.

"The corn show will be held at the grounds of the Worcester County Agricultural Society, where the buildings are well adapted for the purpose and the space ample. The exhibits will include corn, small grains, and grasses and forage crops. These will be classed by states, by zones and by sweepstakes. There will be 245 regular premiums and 37 specials. The cash prizes amount to $5640, and eighty-five other premiums include valuable prizes, such as corn harvester, corn binder, riding cultivator, sulky plow, disc harrow, spraying apparatus, potato planter, manure spreader and five-ton wagon scale. Exhibits will be made by leading manufacturers of farming implements, fertilizers and corn products. There, too, will be found the exhibits of the seedmen and of the other interests identified with agriculture.

"The absence of the vaudeville and amusement features common to county and state fairs will tend to keep the idlers away and those who attend will find here a body of earnest seekers after knowledge. It is not the intention or expectation to make this exposition a money-making affair. The members of the corporate body have given unselfishly of their time and labor to make this of the greatest educational benefit to New England agriculture. It now seems assured that the result of their efforts will be a long step forward in the rehabilitation of New England farms.

"There is nothing that has stimulated the corn-grower and caused him to strive harder in his determination to succeed than the friendly contests that have been held in the past few years. I take corn for a type, for it is the most valuable single crop grown in the United States, and that which is true of corn is true of every farm product.

"The farmer that exhibits his corn has the opportu-

nity of comparing his results with his neighbors; the object lesson is before them and often the difference is great. There are many farmers who are growing corn of an inferior quality but do not know it from the fact that they have never compared their own corn with the best that is being grown. While this is true of neighborhood or county shows, the opportunity for comparison at the larger corn expositions is much greater.

"I will make this assertion. If every corn-grower in New England will send ten ears of corn to the New England Corn Exposition, and go in person, study his corn, make his own comparison, and then make an effort to correct his mistakes, the result will be an increased yield of several million bushels of corn in New England next season."

Mr. Clore will talk corn any day, night or Sunday, but when it comes to talking about himself, that's different.

Unfortunately for his modesty, his great success in growing corn, and his unbeaten record in competition have spread his fame from Russia to Australia, and he has not been able to escape the publicity which attends the leaders in the world's activities. Last year Hampton's Magazine said of him:

"Near Whiteland, in Johnson County, Indiana, lives a farmer. His farm consists of 130 acres, and he gets up at five o'clock every morning, and has holes in his overalls. His name is Leonard B. Clore. He is the Corn King of the World. A dozen years ago Mr. Clore began to specialize in corn. Today he sets the world's pace in this cereal.

"The Clore family very nearly keeps house with father's corn prizes. In the list is everything from a manure spreader to a piano, including watch, clock, stove, mandolin, lawn swing, an automobile, a quarter section of land in Texas, and a $1000 cash prize. One of the incidentals is a silver loving cup valued at $1000.

"Mr. Clore decided a few years ago that instead of spending so much time in improving their land the corn-growers should give more thought to improving their breed of corn. All his efforts have been in that direction.

"In a specially built barn he germinates the corn in boxes of earth kept at the right temperature in early spring by gasoline stoves. Thus he knows before planting what percentage of the grains will germinate. Two ears of corn may look alike, but the vitality of one may be much higher than that of the other.

"Mr. Clore is also a judge of what it takes to make a perfect ear; selecting the best ears each fall and planting the hardest grains in the spring, he has in a great way eliminated chance in corn-growing. He raises from eighty to a hundred bushels of corn per acre. The average this year is ninety bushels. This is about twenty bushels more than before he began his experiments, but, in addition, the quality of his corn has greatly improved.

"What he has done for Indiana, where his methods are followed, may be seen by the fact that the average yield for the past ten years is thirty-five bushels, while over the corn belt of the United States for the same period it is only twenty-five.

"Experiment stations all over the United States are sending to him for his high-bred seed corn and are using his methods of breeding and planting.

"The Czar has offered him a position in the Russian Department of Agriculture."

At the first National Corn Exposition, held in 1907, at Chicago, Mr. Clore carried away the grand sweepstakes prize and his other prizes brought his total winnings to $7,536.50. Ten ears of corn won most of this; sixty ears were all that his exhibit included. The finest single ear was sold at auction for $250—to Mr. Clore. He couldn't afford to part with the most perfect ear of corn in all America. Incidentally, he made that champion ear win $4000 at the next annual corn show, for from this seed he raised ten ears that again captured the grand sweepstakes at Omaha.

The following story from the Omaha World-Herald tells how he was barred from competition at last year's exposition:

"Indiana has won distinction in almost every field of human effort, but the Hoosier State now stands in a class by itself as a corn producer. The National Corn Association, with headquarters here, has just issued an edict that will prevent Leonard B. Clore of Franklin, Ind., from entering his corn in the annual national corn show. The simple fact is that Clore's corn is 'too good.' He has made it reach a state of perfection that bars him from getting in on the competition for prizes in the future. Clore won the grand sweepstakes at the Chicago show, captured it again at Omaha last winter, and carried home special prizes valued at not less than $4000. This same Clore is now considering a proposition to go to Russia to teach the Russian farmers how to grow corn. The Czar has heard of him and wants him.

Mr. Clore's white dent corn has always been a centre of interest at the corn shows and he has come to be known as 'the corn king' because of his winnings. He has taken home automobiles, pianos, clocks, all kinds of furniture, farm implements, and other articles that have been awarded him because of the quality of his corn.

"The National Corn Association seems to feel that Clore has had enough. He has got so good at the corn-growing business that he has nothing else to learn about the game. He has been so successful that it is evident the other farmers are losing interest in the competition. So the National Corn Association is going to put Clore in a class all to himself. True, it will be only an honorary position, but he will have the satisfaction of knowing that his corn is so good that he is barred from competition. He will hold the beautiful silver trophy awarded him at the last Omaha show."

Mr. Clore was but a boy when he made his first corn exhibit and that exhibit captured a first prize. Year after year, he continued to win. As he gained experience, he began to send entries to the larger fairs, winning first prizes at many state fairs, a medal at the Paris Exposition, and the first prize at the Louisiana Purchase Exposition at St. Louis. He is a student as well as a farmer. His original experiments caused an Australian correspondent to dub him, "the Burbank of Agriculture."

The New England Corn Exposition is fortunate in securing a man of the caliber and experience of Mr. Clore as its manager. His thorough knowledge of corn culture and his energy and enthusiasm in the dissemination of the most advanced ideas in agriculture make him especially fitted to plan and execute for a corn show of the magnitude of the one to be held next November in Worcester.

Church of St. John's, Worcester

The Story of the First Catholic Parish in the Diocese of Springfield, Its History, Activities and Achievements

By Rev. John J. McCoy, D. D.

IN the winter of 1702 Digory Serjent, "who owned house and four-score acre of land" (which lay within the township of Worcester), was killed in his house on Sagatabscot Hill by Indians under command of Sagamore John. "They took with them as prisoners the mother and her children, Daniel, Thomas, Martha and Mary. The delicate mother, unable to keep up in the journey to Canada, was killed by a chief of the party as they ascended the hills of Tataesset. The children were taken to Canada. Daniel and Mary preferring the wild freedom of their captors to the restraint of civilized life, adopted the manners of their captors. They never again lived with their relatives, though they once made them a visit when Eunice Williams, taken at Deerfield, returned." Inasmuch as the captives taken then and who refused to return, all became Catholics, as did Miss Williams, it may be fair to say that the first known Catholics in Worcester were these two children of Digory Serjent, Daniel and Mary.

The historian, Lincoln, says: "In the autumn of 1755, that cruel measure of policy, the darkest blot on our history, the removal of the inhabitants of Nova Scotia and their dispersion through the Provinces, was executed by General Winslow. About a thousand of the French Neutrals, as these unfortunate people were called, arrived in Boston at the beginning of winter, and were distributed among the several towns designated by a committee. The proportion assigned to Worcester was eleven. They were received and supported by the Selectmen, at the expense of the Province.

"The aged persons died broken-hearted. In 1767 the remnant removed to Canada among their countrymen. The town then granted seven pounds to lay in stores and pay the passage of John Lebere to Quebec, and authorized the Selectmen to raise that sum by loan." These people were Catholic.

Rt. Rev. Monsignor Thomas Griffin, D. D.
Permanent Rector of St. John's

The Catholic Indians of Maine, the Penobscots, Passamaquoddies, and the St. Johns were invited to Washington in the time of the Revolution to join the cause of freedom. Their delegates came for counsel to Watertown. They agreed to serve the Americans in the coming struggle, but made one request. "We want a 'Black Gown' or French Priest," they said. It was agreed; they served the Americans faithfully, and in coming and going to and from their homes during the war it is supposed they passed through Worcester. After the Revolution, in order to serve these poor Indians and the other Catholics gathered along the route, Rev. John Cheverus, afterwards the first bishop of Boston and Cardinal-Archbishop of Bordeaux, passed frequently through Massachusetts and the greater part of the New England states. The old road was through Worcester and is in existence to-day.

The first mention of a body of Catholics in the city was in the year 1826, when, as old parish records have it, "Catholics first came to this town of Worcester." They were composed of Irish emigrants brought here by contractors who were employed in the construction of the Blackstone Canal. This work was in progress two years, and many of the laborers stayed in the town. Occasionally they were visited by the priest. Soon afterwards Catholics began to settle in different parts of the county. The great body, however, were poor Irish laborers who had followed the course of the great Western railroad, and these begged for a priest to come and live with them. Accidents from the sudden caving of banks and from the blasting of the ledges frequently occurred and no priest was by to console the dying laborer. A permanent priest was a necessity. In 1834 Bishop Fenwick appointed Father Fitton, then pastor at Hartford, to visit them once a month. He came and was greeted with blessings of eighty glad people. Encouraged by the spirit he

found among them, he set out immediately to procure a site for a chapel, and as the old records run, "on the 7th of July, 1834, at the instance and earnest desire of the Catholics, purchased a lot of land on Temple Street, and laid the foundation of a small church."

On the 7th day of July, 1834, the foundation of the first church in the now diocese of Springfield was laid. It was a small frame building sixty-two by thirty-two feet. The people were unable to do more than lay the foundation the first year. Between the basement walls at a rough altar covered with boards was said the first mass by Father Fitton. This was not, however, the first said in Worcester.

Masses were frequently said in pleasant weather on the large rocks, which rise up in the little knoll just in the rear of the old "Dummy" station, where one enters the deep cut on the Boston & Albany Railroad. This mass was for the benefit of the Catholic roadmen, and was said every Sunday, when it was possible for the priest to be there. On such occasions the men erected a rude altar on the side of the rock, and carrying spruce branches from the woods would cover the place overhead. In this bower, amid the wild flowers, which the poor men gathered, and the sweet-smelling spruce branches, the priest read the mass, while the men and their families knelt about in the sunlight.

In 1835 the people had the joy of seeing the walls of the little church up and the roof over it. In two years from the first beginnings it was completed and paid for. "It was erected," says the old records, "by the Irish laborers employed on the railroad." Up to May, 1836, the people had been without a resident pastor. Father Fitton came up from Hartford monthly, but not till this year did he make Worcester his home.

Whenever from 1834 and long afterwards it was known that there would be mass at Christ's Church, the people would gather in even from Clinton, Westboro, Oxford and other towns hereabouts. In the good seasons men and women walked the distance. When the priest could not come on Sunday the people went to the church for prayers just as when he was there. Some of the elderly men of the congregation read the prayers of the mass, and led in the recitation of the litanies. Mr. Richard Roche, Henry Murray, and later, John O'Sullivan, generally did this pious work. The people in innocent humor used to call these gatherings the "dry masses."

The first Sunday school was begun and presided over by a young lady convert named Eliza Whitney. Eliza opened the Sunday school, assisted by John and Robert Laverty, then young lads of the congregation. The first Sunday saw seven children, amongst whom were James Underwood and his brothers, William and Charles Rourke, the sons of Patrick Rourke. During the week following Miss Whitney learned the whereabouts of other Catholic children. The Laverty boys sought them out, and the next Sunday they could count fifteen in the class. To-day the school of St. John's alone numbers its children in the thousands.

The first choir was made up of Mary Fitton, Patrick Sheridan and Henry Murray. The church had an orchestra for times of great services. Patrick Sheridan played the clarionet, John Laverty the violin, his brother Robert the bass viol, Anthony Carpenter the violoncello, and Henry Murray the flute. The first altar boy was James Underwood, and the first altar society consisted of Mrs. Henry Murray and Mrs. Richard Rourke. The earliest class of children in the parish to receive first communion in a body came the second Christmas Day after the building of the church.

The people who came to mass in those days in old Christ's Church were, strangely enough, from many nations and callings. Every summer a portion of the Penobscot tribe of Indians, among whom, just after his ordination, Father Fitton had been for a time a missionary, came down from Maine and pitched their tents at the foot of Temple Street. They came every Sunday to the mass in solemn procession, and assisted with every sign of respect and adoration. After mass they had a custom of gathering in a circle outside the church door, and there, kneeling on the ground, awaiting the coming of the priest. After his thanksgiving, Father Fitton, who knew their habits, went out into the circle, lightly laying his hand on each bowed head in benediction. They then arose satisfied, and went their way.

Another feature of the time was the attendance at mass of the United States soldiers, who were here in training for the Florida Indian war. The old storehouse of the canal was turned into a barracks. The training-ground was just across the canal on Burt Street. The great majority of the recruits then here were Catholics, and attended mass in full uniform each Sunday.

Father Fitton left Worcester in 1843, and Rev. A. Williamson of Baltimore came in his stead. Father Williamson's health was broken when he came, and he was soon obliged to return to his native south. Just three weeks after his farewell to the people, intelligence came back of his death.

When Father Gibson came as a resident pastor, April 5, 1845, he found the altar entirely unprovided. There were no chalice or vestments, and, but for the loan of such by the bishop, the people could not have had mass that day. He advised a collection for the buying of the needed articles, and a meeting was called by him for this purpose after the vesper service the same day. In this meeting was born the spirit of activity which has remained with the Catholic people of the city ever since. In this meeting, too, were born the first signs of trouble and discord. Some time before the going of Father Fitton, he had in mind the enlargement of the church, and for such a purpose he collected five hundred and fifty dollars. The church had not been enlarged, and the money had been put into the bishop's hands until the congregation should need it. Some of the men were for drawing this, and using it for the purchase of the chalice, vestments and other paraphernalia for the altar. The bishop, when petitioned, replied that he had the money, but that he considered it a sacred deposit, and would not permit it to be diverted from the intention of its donors. He advised them to raise money for their needs. A collection was immediately made according to the bishop's request, and the vestments bought; but the signs of trouble which had been noticed in the meeting of April 6th now showed afresh. Every man had his own way and ideas for the bettering of church affairs. Every man so thinking aired his notions among his neighbors. The consequence was that shortly a good deal of bad blood was shown. To be a member of a committee in those days was like being a councilman or aldermen in ours, and, since there were not committees enough to go round, we can imagine what a noise

Courtesy of J. Albert Cole

St. John's Church, Worcester
The First Catholic Parish in the Diocese of Springfield.

was made. The dissatisfied men, of course, did not give this as a reason for their conduct, nor was it always the reason. Many had no other, but there were some "seditious and refractory;" some went wrong "owing to ignorance;" others again wanted to enlarge the church; some wanted Father Fitton back as pastor, while others yet desired "a new church, and in another part of the town." Dante said of the leaders in a small political trouble in his country once:

> "Every clown on faction bent
> Makes as much clamor as Marcellus did."

And in a sense the saying can be applied to the leaders of the trouble in the old parish, "there was more noise than mischief." Yet it was not all noise, for some of the wild fellows closed up Father Gibson's house, and he could not enter. He was in this state obliged to write to the bishop and ask his interference. The bishop came at his request and, after the gospel at the late mass, spoke to the people. He urged union and charity; no other way could do for the establishing of the Catholic religion. He left them free either to enlarge the old church or to build a new one, but he forbade any change of site from the one then occupied. After mass he gave audience to all who had or fancied grievances. The bishop's sweetness of temper changed the war. Then began an enthusiasm. In a new meeting it was ordained that "a new, large and respectable church be erected on the site of Christ's Church." How wonderful are God's ways with us! One day the outlook in His work is seemingly hopeless, and the next the successful ending of the same is assured. So was it in the old parish. The idea of the new church put an end to the dissensions and quarrelings. There had been a great deal of noise and a great deal of dust, but when the clamor was hushed and the cloud had settled, there was God seen working out His purpose under it all. And the hearts of the people were with His purpose. The heads of some of them had gone a little astray, and that was all.

It was determined to build a church in brick, and the preliminaries, plan, style of architecture, etc., etc., were left to the pastor. The old church was moved to the northwest corner of the church lot by a Mr. Hughes, for one hundred dollars, and the contract for this work was given him April 28, 1845. The old church fixtures were sold for one hundred and eighteen dollars and seventy-four cents, and this more than paid for the removal of the old building. On Sunday, May 11, 1845, Father Gibson before the sermon asked the men of the congregation to assemble at the church the next morning at eight o'clock, and after mass to help in digging the foundations for the new church. At his request they assembled. Mr. Patrick Conway, one of the oldest settlers, requested the pastor to grant him the privilege of beginning the work, which, being granted, all made the sign of the cross, and Patrick, invoking the name of God, struck three blows with a pick-axe and took out the first spadeful. Then all began. About two hundred men worked all day, and at sunset a trench was dug out four feet deep and three feet wide. Then with three hearty cheers the men went to their homes. The corner-stone was laid May 27, 1845, by Rt. Rev. John B. Fitzpatrick, Coadjutor Bishop of Boston. The sermon was preached by Rev. Nicholas O'Brien both in English and French.

Before the 12th of June there were several bids for the building of the superstructure. The lowest bidder, Mr. Samuel D. Harding, who offered to erect the church for nine thousand dollars, was given the contract, and was asked to meet the committee and sign the agreement. He refused under the plea that the time allowed him for the building was too short, and that the material and labor were then so high as to make impossible the building of the church at the figures specified. The congregation was so displeased with Mr. Harding that they refused to treat longer with him. Father Gibson was then asked in a public meeting to take the whole affair upon himself, and unhindered by wise "committeemen" and "meetings" to "go ahead and build the church." He assented. This was the 6th of July. The 7th he appointed Mr. Boland general superintendent, and before the evening of the 8th had a contract drawn, agreed upon and signed. The church was to be completed, except the pews, pulpit and altar, for nine thousand six hundred dollars. The work was pushed briskly, and on the 16th of August Mr. Boland reported the foundations and underpinning ready, and so vigorously and sharply did the builders follow him that the end of October saw the rafters of the roof in place and the spire lifting itself above them. Just then the people found themselves obliged to face a difficulty which for a while seemed to threaten a delay in the building. The moneys looked for from the voluntary contributions of the people fell off very considerably. Much more had been expected and promised than actually came in. Father Gibson had agreed to furnish monthly instalments to the builders. He was unable to do so. Then he thought of raising money by mortgaging the church property, and herein came the trouble.

Finally, in April, 1846, the Court of Chancery heeded the popular request and granted permission for a mortgage upon which might be raised from five to seven thousand dollars for a period of ten years. The Worcester Bank of Savings took the mortgage and gave Father Gibson five thousand dollars thereon. The sailing was fair and pleasant now. The church was near enough to completion to warrant it wise in Father Gibson to appoint the 24th day of June following for the dedication, and it took place the day appointed. The Boston *Pilot* of July 4th, 1846, describes the church as in "Roman-Doric style," and as "an ornament to the town." Thirty-two clergymen were present at the dedication, at which Bishop Fitzpatrick was the officiating prelate and Rev. Dr. Ryder preached to an immense audience. The sermon is spoken of by the *Pilot* as of "peculiar eloquence and force." The subject was "Sacrifice."

It was on Nov. 14, 1847, that Father Boyce came to Worcester as associate pastor with Father Gibson. What a world of memory is opened up in the lives of the old people of this city by the charm that lies in that name, Father Boyce! Worcester has never known his like. There have been, and there now are, able priests, learned priests, and holy and kind-hearted priests in the city. The people know them, respect them and love them, but there is not now a Father Boyce among them all, nor has there been since the great heart was hushed, and the teeming brain stilled, and the people left the grand figure sleeping in the sunshine near the pines he himself had planted, and whose voice and breath in life he had loved so well. As was to be expected, a new zeal was awakened in Catholic work when Father Boyce came. The people

had increased in numbers through immigration and by birth. In 1848 there were 407 baptisms. This year there were twelve missions attended from Worcester, viz.: Fitchburg, Webster, Millbury, Clintonville, Milford, Southbridge, Uxbridge, Templeton, Barre, Winchendon, West Boylston and Hopkinton. During the pastorate of Father Boyce was born Know-nothingism.

The Catholics of Worcester had been successful, and had grown to importance in the community. They were, therefore, made the object of senseless and bitter attack. So high did feeling run that the church property was in danger of destruction. Father Boyce at this juncture took the keys of the church to the mayor of the city, saying: "On your head, sir, I place the responsibility for the protection of our church. If you do not protect it, we will; but at the city's door will lie the blame." Our young men following that soldier instinct that lightens through our blood, had formed themselves into a military company in 1852. Governor Gardiner ordered, in obedience to the ignorant cry of the Know-nothings, their disbandment in 1855. In a few years the tocsin sounded for war, and the skies were black and red. Brave men were needed, for the foe was at the nation's throat. The Jackson Guards, founded in 1858, rose like the men they were. Father Boyce blessed their battle-flags, blessed them, and bade them go; and so indeed, first in the land, forgetting insult and distrust and humiliation, they signed the enlistment rolls, and carrying in their bosoms the warmest and tenderest and bravest and best hearts of our people, before others awakened, were away to the Southland, and on the battle-fields, amid the horrors of the strife, made forever red and beautiful in their blood, the noble record of Worcester's Catholic soldiers.

Father Boyce was associate pastor until 1856, when, on the going of Father Gibson, he became sole pastor, and thus remained until his death, Jan. 2, 1864. He was succeeded by Rev. P. T. O'Reilly, who retained the pastoral care of St. John's until Sept. 25, 1870, when he was created Bishop of Springfield. Then Rev. Thomas Griffin, who had been his assistant since July, 1867, was named chancellor of the new diocese, and administrator of the parish of St. John's. He was made the permanent rector May 30, 1885.

The hardest worker in the diocese of Springfield is Rt. Rev. Thomas Griffin, D.D., pastor of St. John's. This is the largest, as it is the oldest, parish of the diocese. He has built and maintained since 1872, under the care of the Sisters of Notre Dame and at a high standard of excellence, the largest school for girls in the diocese. In 1891 he built for boys a school capable of answering the needs of six hundred scholars. He now had the Xaverian Brothers in charge of his boys and buildings. This accomplished, he had a right to feel that he had done his duty along educational lines to church and neighbor, and had earned title to Catholic gratitude and some of the sweets of rest. But he never rests. When a curate, and hardly a year ordained, he purchased a church for the people at Holden; next he built a church at Stoneville, and when Shrewsbury was taken from Worcester and attached to West Boylston parish, the new pastor found a neat sum in the bank, left there by Father Griffin as a nucleus for a mission church.

In 1871 he began the formation of the parish of the Immaculate Conception in Worcester; and, in 1880, reared the walls and roof of the church of the Sacred Heart. His last work in parish building was the choosing of the site for St. Stephen's. The Bartlett estate on the heights opposite Mariemonte, on Vernon Street, was purchased by Father Griffin in 1886; and in the fall of 1893 Bishop Beaven helped the fulfillment of his long-cherished hopes by sending the Sisters of Providence to found there a hospital for the sick, and an asylum for the old. In recognition of his great labors, and at the earnest solicitation of Bishop O'Reilly, the Holy Father, in 1889, made Father Griffin a domestic prelate, and in the next month his Alma Mater, St. Mary's, Baltimore, honored him with the Doctorate of Divinity. Monsignor Griffin is now in his seventy-third year, and has been about forty-two yeara priest.

He is a strong man, of clear head and honest heart. His learning is more solid and serious than showy; hence it is that many inferior men have more reputation. He is not an orator; but no man of the Springfield diocese can talk sounder sense or fill his sermons with greater weight of truth's real gold. He works morning, noon and night. The old bishop, who was his closest friend on earth, used playfully to find fault with him for expecting his assistants to work morning, noon and night, when as the bishop would add, "God did not build them on the same lines."

Monsignor Griffin does not work for self. He has had the revenues of a large and generous parish for years; yet those who know him best, know him to be a poor man, who has spent his means in God's work, and is now wearing out a good life in ceaseless watching of church and school and convent and hospital. He will work to the end. He says of himself: "I shall fall in the harness."

Rev. Thomas Griffin, D. D., was born in Cork, Ireland in 1836. His early studies were made with the Christian Brothers in his native city. He came to Salem, Mass., in his sixteenth year. After some years of work wherein he earned a competency, he began the study of classies at St. Charles' College, Maryland. He made his philosophical and theological studies in St. Mary's Seminary, Baltimore, and was there ordained June 29, 1867. In July following he was appointed by Bishop Williams to St. John's, and all his life since he has labored here.

At the present time Rev. Fathers Austin D. O'Malley, George H. McDermott, John F. Boyle, James B. Donahue, and Florence A. Lane assist Monsignor Griffin in the work of the parish.

Eighty people were present when the first congregation began in Worcester. They were then "Irish emigrants." At present the parish has upwards of 9000 people, who are Irish by birth or lineage.

The parish now controls St. John's brick church, the Catholic Institute, a brick presbytery, the Brothers' monastery in brick, the Sisters' chapel, a fine brick school for boys, between Winter and Temple Streets, and the brick school for girls on Vernon Street. Also considerable land with dwelling-houses fronting on Temple Street, and a large cemetery in New Worcester.

A more recent achievement of Monsignor Griffin was the building of a magnificent convent home, in brick and stone, for the Sisters of Notre Dame on Vernon Street. At the present time 1300 boys and girls attend the parochial schools. The boys' school is in charge of the Xaverian Brothers, Brother Henry superior and the girls' school of the Sisters of Notre Dame of Namour, Sister Hilda superior.

Editorial Reflections

The Lesson of Fitton Field

The Playground Festival held on the beautiful green of Holy Cross College Wednesday, August 24, was the most inspiring spectacle of its kind ever witnessed in New England and perhaps in this country. This utterance is written advisedly and with full knowledge of what such a claim implies. A celebration which attracted and exploited 6000 children, and was attended by nearly 10,000 adults on one of the hottest and most uncomfortable days this summer, which went off without a single accident to mar it or a child being lost, buttresses this claim. Nor is this all. When one stops to think that the whole playground movement is a novelty in Worcester, and that within two months it has been financed, launched, a corps of instructors hired, and every feature boasted by the older and much more liberally endowed associations, incorporated in the work here, the wonder aroused by the exhibition grows to amazement.

The celebration was not a justification of the money spent on the playgrounds this year in Worcester and was not so intended. In order to ascertain how wise has been this outlay, one must spend more than one hot summer afternoon on Fitton Field.

What the celebration did attest was the tremendous interest of the children themselves in organized inspired recreation, and the delight of their parents in seeing what had been accomplished in less than eight weeks in making little citizens out of raw material.

The argument of the unthinkng man and woman opposed to the whole playground movement, is that it ought not to be necessary to teach boys and girls how to play. The answer to that is that the most popular game in the world today is baseball, and boys have to be taught how to play that, and if they are to play it at all satisfactorily they must maintain absolute discipline while they are learning and afterwards.

It takes organization and leadership to learn how to play polo well, either roller or horse; it takes organization and leadership to learn how to play cricket or lacrosse or football; it certainly takes organization and leadership and the sternest kind of discipline to win a boat race or a track meet. The colleges have found all this out, and the college boy who flunks in Latin or Greek with the utmost nonchalance, goes on the football field with the steadfast determination in his heart to win or die in the attempt.

Nothing is said here about the courtesy, the manliness, the fair play inculcated into boys playing under a leader whom they admire and love, yet every person connected with the playground movement knows the growth in decency, honesty, square dealing, politeness and clean speech these playgrounds bring about.

Far be it from us to contend that the playgrounds of Worcester or any other city, convert the boys playing upon them from mischievous urchins into either saints or mollycoddles. Such a statement would not be true, either here or elsewhere. What we are trying to say is that the playground movement properly supervised puts the dynamic energy of boys and girls at work along lines beneficial to both their moral and physical welfare instead of allowing it to go to waste, as it does go when it is not thus properly supervised and controlled.

That the movement in this city has produced in one short summer such splendid results is an earnest of what can be done here in a very few years, if the impetus already given is conscientiously and intelligently followed up.

It is a trite aphorism that the children of today are to be the citizens of tomorrow, and it is true as trite. The school of citizenship has many sessions and sometimes they are held in dubious places, but there can be no question in the mind of any thoughful person that the lessons of sobriety, clean speech, courtesy and fair dealing learned in play centers such as Worcester has boasted this year, make for a higher type of citizenship than those learned by the crap shooting, fighting and card playing gangs that have, alas, infested even this city in the last few years.

It is of course highly desirable that every boy and every girl should be trained in the rudiments of virtue, honor and common decency in the home. No better place has ever been invented or ever will be for that work. Unfortunately in an industrial community of this type thousands of young people have no home, in the sense that the more fortunate classes understand the word. If these young people, both boys and girls, are to be saved to society, it must be through associations of this type. It is natural for children to play. Nothing is more certain than the fact if their play is not supervised upward it will be supervised downward. It is either the "gang" leader—the boss of the gang—or it is the playground leader—the supervisor—that is going to have the children of the streets.

What the former will do with them is shown by the Forty Mollies and the Forty Thieves of Worcester. What the latter will do with them was shown on Fitton Field on the 24th day of August, 1910. As good citizens anxious for the welfare of the Republic, concerned for the preservation of our institutions and desiring peace and prosperity under the law for every individual, can you hestitate for a moment on which side to throw your influence and your money?

The Corn Show

The announcement elsewhere in this issue of the Worcester Magazine of the engagement of General Manager Leonard B. Clore to take charge of the New England Corn Show in this city Nov. 7-12, marks another and a long step forward in assuring the success of this epoch-marking event. Statistics constantly being issued by the census department attest the failure of the "back-to-the-land" movement. In spite of all the sentiment in its favor, men and boys are not going back to the land. They are leaving the land and flocking to the cities. Hardly a city in the United States, small or large, but what shows an increase in population over ten years ago, and in some cities like Detroit the population has practically doubled in that time.

Why should a boy stay on the farm when he can go into the city and earn $19.25 a week as a policeman, and $18 as a clerk or bookkeeper. One reason why he ought is because if he stays on the farm at the expiration of the year he has the farm left, while if he stays

in the city he has nothing left but his experience. To be sure, farm land isn't very valuable in New England. You can buy a forty-acre farm, with a good set of buildings on it, in more than one section of New England for $1200, but in the middle West, where they make a business of farming, farm land is worth $175 and $200 an acre.

The New England farmer shakes his head when he reads statements like that and says that nothing of that sort will ever be true of New England. Perhaps not. Certainly not under existing conditions. The way to make land valuable is to produce more from it. An addition of ten bushels of corn per acre to the yield in New England would mean $1,000,000 a year to the agriculture of this section. When that addition is effected, farm land in New England will begin to be worth cultivating.

The New England Corn Show will reveal to the farmers of New England how that extra ten bushels of corn can be secured. And not only ten, but twenty. Some mighty fine corn is being grown in New England this year as a result of the inspiration of this show, but the real benefit will not be evident until 1911.

Meanwhile, why shouldn't this show and the sentiment behind it attract attention?

Every New England governor is interested in this exposition; every New England agricultural college, every New England secretary of a state board of agriculture, every New England railroad, every secretaary of every big board of trade, every master, and every member of a subordinate grange—all, all are interested. And that includes pretty nearly everybody that raises corn or eats it.

Say what you're a mind to, this corn show is bound to be the biggest and most unusual magnet of an exposition ever held in the East, not because Worcester is interested in it and is backing it, but because New England is interested in it and is backing it. And what New England is interested in and backs was never yet known to fail.

The Landing of the Pilgrims

The visit of the advertising men connected with the newspapers and magazines of Boston, New York, and other large cities to Edgemere, on the shores of Lake Quinsigamond last month, seems to have been a vociferous and halcyon occasion if the stories told about the outing are true. The newly-organized Worcester Publicity Association has hardly got out of its swaddling clothes, but it made a brave attempt at acting as host and sometimes it is almost tempted to feel that it succeeded. The visitors brought their own talent with them and were, for the day at any rate, a law unto themselves. They certainly owned the lake, or as much of it as abutted on Edgemere. The dinner seems to have satisfied even as finicky a party as Bostonians can be when shell fish is under discussion, the Norton Company and the Wire Goods Company gave away souvenirs until the visitors fairly refused them, the orchestra, if applause is any criterion, was certainly inspiring to most of those that heard it, while the sports and the theatrical performance at night rounded out a busy day's events. It would appear that the Pilgrim Publicity Association in search of an outing might go farther and fare worse than come to Worcester. It will probably be difficult, if not impossible, for them to go farther and fare much better.

Good Candy

The editor of the Worcester Magazine, wending his way to the office of the Board of Trade on a recent morning, encountered an artistically decorated confectioner's wagon, on which was the simple inscription, "Good Candy." It struck his mind like a blow, and he could not help philosophizing about it even after the vehicle passed out of sight. Here, evidently, was an unconscious psychologist, as well as a competent confectioner. He realized the value of repression as well as expression. He did not blazon on his cart "Magnificent Candy," nor "Superb Candy," nor "Ne Plus Ultra Candy," nor even "Best Candy." He simply used the fine, old-fashioned, homely adjective "good."

There has lately been a revolt in this country against the test of goodness. Like the revolt against Aristides, the just men seemed willing to reject goodness as a test because emphasis had been laid upon it so long. Indeed, we recently read a profound essay upon the work of the Bureau of Municipal Research of New York, in which the author solemnly asserted that the organization in question was not so much concerned with the goodness of its employes and investigators as it was with their efficiency, and he went on to assert that hereafter in public affairs the attempt would not be so much made to secure good men as to secure efficient men. In spite of the casuists, it would seem to a thoughtful mind that if goodness is an asset of character, a man possessing efficiencey, plus goodness, would be more valuable than an efficient man minus goodness.

Evidently, the man who inscribed "good candy" on his cart felt that goodness is an asset, and that as a description it conveyed to the intelligence of all and sundry, stronger than any other word could, the fact that he not only made candy, but he made candy that was desirable, dependable, and altogether satisfactory. And, after all, could he have said anything stronger? Are we not in danger, in this country, of defeating the very end we aim at in our extravagant use of adjectives?

Can rhetoric ever take the place of facts? Is there not an instinctive disposition on the part of the human mind to distrust and discount the extreme in assertion and claim? We believe there is. It is said that the Germans have become prejudiced against American-made goods because of the extravagant claims that are put forward as to their superiority, and that the foreign representatives of goods produced in the United States find that all the continental nations are becoming suspicious of our products because of the flamboyant advertising that characterizes their marketing. They have discovered that instead of this being an asset of value it is a positive handicap.

Our Western brethren are particularly strong in the use of superlatives. Everything they have or make is the biggest and best.

The American is naturally an enthusiast; his optimism is always on tap. He hates to be reminded that there are others. Probably no book Charles Dickens ever wrote is so unpopular in the United States as Martin Chuzzlewit. It was written, to be sure, during the ante-bellum period, but it has too close an application even to-day to be relished.

Perhaps the "good candy" man is the advance guard of a return to quieter and more conservative methods. Let us hope so.

Worcester Quotations

Furnished by Thompson, Towle & Co., Worcester, Mass.

AUGUST 20, 1910.

	Bid.	Asked.
BANKS		
Mechanics National Bank	150	
Merchants National Bank	170	
Worcester National Bank	210	
Worcester Trust Company	325	
RAILROAD STOCKS.		
Boston & Albany	220	last sale
Boston & Maine common	138	last sale
Boston & Worcester Elec. common	.....	10
Boston & Worcester Elec. pfd	36	.....
Fitchburg preferred	125½	last sale
New England Inv. & Sec. pfd	90	92
New York, New Haven & Hartford	150¾	last sale
Norwich & Worcester	210	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investment	75	80
INDUSTRIAL STOCKS.		
Crompton & Knowles pfd	150	.....
Denholm & McKay common	200	.....
Denholm & McKay pfd	100	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd	110	115
Royal Worcester Corset Co	140	.....
United States Envelope common	50	52
United States Envelope pfd	114	116
Worcester Gas Light	275	.....
Worcester Electric Light	270	290
Wright Wire Company common	102	.....
Wright Wire Company pfd	110	115
BONDS.		
Amer. Writing Paper 1st 5's	88½	last sale
Boston & Worc. St. Ry. 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles Deb. 6's	5%	basis
Marlboro & Westboro St. Ry. 1st 5's	.....	90
Norcross Brothers 1st 6's	99	100
United States Envelope 1st 5's	101½	101½
Worcester Cons. St. Ry. 1st 4½'s	90	
Worcester & Marlboro St. Ry. 1st 5's	.....	100
Worcester & Southbridge St. Ry. 1st 4½'s	85	87

Denver and the Steel Trade

The Denver Chamber of Commerce and Colorado Manufacturers' Association are working together in an endeavor to lower the rates upon raw steel and iron between Pittsburg and Denver. These products come to Denver under fifth class (94½ cents), while they are shipped to the Pacific coast under commodity rates (80 cents). A large plant to be erected in Denver depends upon the success of this fight to secure reduced rates.

Bonus Lands a Big Factory

The Wooster (Ohio) Board of Trade has agreed to pay a bonus of $30,000 to secure the Canton Hughes Pump Company. The contract calls for the erection of buildings and the employment of seventy-five hands by the first of next April, and further stipulates that by January, 1912, a force of 200 men shall be at work. The concern is capitalized at $150,000.

Building Operations for July

City	July '10 Cost	July '09 Cost	Percent Gain	Percent Loss
Atlanta	$989,112	$346,878	185	
Baltimore	753,404	792,120		4
Birmingham	305,039	334,098		8
Buffalo	893,000	1,393,000		36
Chicago	5,253,200	6,856,250		23
Cincinnati	842,320	830,430	2	
Cleveland	1,094,638	1,283,363		14
Columbus	313,778	284,145		10
Dallas	890,865	388,720	128	
Denver	1,765,635	2,240,670		2
Detroit	1,556,665	1,651,760		5
Duluth	266,955	128,965	45	
Grand Rapids	242,080	346,244		30
Hartford	387,015	169,235	128	
Indianapolis	889,510	628,727	41	
Kansas City	1,548,465	1,334,715	18	
Knoxville	70,236	134,340		47
Little Rock	129,976	210,130		38
Los Angeles	1,319,268	1,022,213	98	
Louisville	335,970	278,976	20	
Manchester	113,275	152,225		25
Milwaukee	1,177,345	1,087,004	8	
Minneapolis	1,151,930	1,001,180	15	
Nashville	203,320	175,223	16	
Newark	729,202	990,990		26
New Haven	218,257	537,310		59
New Orleans	428,620	522,780		18
New York	12,691,620	27,470,123		52
Oakland	452,024	406,326	11	
Oklahoma City	565,930	289,315	95	
Omaha	463,975	815,280		43
Paterson	174,291	144,264	26	
Philadelphia	3,462,665	3,897,590		11
Pittsburg	958,593	1,506,923		42
Portland	847,080	911,570		7
Rochester	550,336	1,030,815		46
St. Paul	1,116,861	770,498	44	
St. Louis	1,976,350	2,066,059		4
Salt Lake City	443,400	490,500		9
San Francisco	2,334,790	1,829,421	27	
Scranton	267,308	1,138,505		76
Seattle	1,655,495	1,275,415		29
Spokane	452,405	583,110		22
Syracuse	351,243	440,015		20
Tacoma	221,815	333,604		33
Toledo	159,397	209,396		28
Wilkes Barre	216,138	180,885		19
Worcester	281,152	445,347		36
Total	$53,568,148	$73,445,442		27

Atlanta Seeks Conventions

Atlanta believes that its location and facilities entitle it to special favor as a place for conventions, and an organized endeavor to secure them will be made by a joint committee composed of representatives from the Chamber of Commerce, the Hotel Men's Association, the retail merchants, the City Council, and the real estate men. The Atlanta Constitution says:

"Conventions mean word-of-mouth publicity from one end of civilization to the other—and that brand of publicity is the most effectual open to the enterprise of any community.

It is to the pocket interest and the prestige of every factor concerned in the growth of Atlanta to co-operate liberally in this latest campaign for advancement."

The committee on by-laws of the Waltham Business Men's Association recently recommended that action be taken to secure a permanent secretary.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

Willard E. Smith, Envelope Making Machine, No. 965,252.

A machine for automatically attaching a metal fastener to the body of an envelope comprising the combination in a single machine of means for selecting a fastener from a mass of fasteners and presenting it individually in proper position to be attached to the body of the envelope; means for suitably registering the envelope; means for attaching the fastener to the body of the envelope; and means for simultaneously punching and staying a hole in the seal flap in proper position to receive the metal fastener when the envelope is closed.

G. H. Coates, Sanitary Cover for Flesh-Contact Implements, No. 965,564.

A sanitary cover for a flesh contact implement having portions of its face raised, comprising a base plate, stiffening means for holding this base plate extended in order to contact with the face of the implement, and individual covers attached to the base plate for these raised portions.

J. P. Bird, Machine for Attaching Fly Strips to Boxes, No. 966,122.

A machine for attaching fly strips to paper boxes so that the detached strip may be moved lengthwise in order to provide a gap between it and the end of the continuous fly strip paper for the insertion of a paper box.

C. W. Hobbs, Piecing Machine for Paper Box Blanks, No. 966,834.

A piecing machine for box blanks consisting of a table for supporting a sheet of cardboard, adjustable stops for determining the position of this sheet on the table, a feeding mechanism for carrying a second sheet of cardboard, provided with a pasted edge, into position overlapping a portion of the first sheet, a support arranged to contact with the under side of the second sheet, means for holding the second piece in contact with the support against the backward movement of the feeding mechanism, and means for bringing the overlapping edges of said sheets into contact and exerting pressure upon them.

Large or Small Factories?

"The palpable need of San Diego is small factories. Large factories would be acceptable in proportion to their magnitude; but it has been the experience of communities that an aggregation of small manufacturing establishments operating in diversified products, is more profitable in a growing city than one or two enormous plants. The small factory paying a satisfactory income upon the modest investment attracts others until there is a congeries of enterprises which, eventually, may be combined into larger businesses.

"What San Diego needs above all other things as the basis of its future prosperity is the Saturday night payroll. It is the industrial class that gives permanent stability to every community. This is the population that sustains the mercantile interests of every city. It is the workingman that pays for homes and furnishes the money for legitimate investments of the savings banks, which in turn promote the larger interests of the city. It is the artificer and the producer that builds cities and maintains them." San Diego (Cal.) Union.

Local August Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

The month has not developed any unusual activity. The customary midsummer dullness has prevailed in many lines so far as new business is concerned, but leading manufacturers are reporting more inquiries for fall trade, and look for increased activity.

Local bank clearings for July showed a total of $9,984,432, showing a gain of 32.9% over 1909, when they totalled $7,514,592, and a gain of 56.5% over 1906, when they amounted to $6,379,663.

Failures in the county during August showed a total of five, with liabilities of $35,207 and assets of $5566, while in 1909 they totalled ten, with liabilities of $92,634 and assets of $35,344, while for the corresponding month of 1906 there occurred eleven failures, with liabilities of $52,901 and assets of $32,545.

Current Events

General

July 26. Automobile hosecart delivered to Fire Chief Coleman.

August 1. July postal receipts were $33,428.37, an increase of $2,210.71 over July, 1909.

1. Boston & Maine R. R. starts grading twenty acres near Millbrook Street, to be used for freight yard.

2. 2091 instruments were recorded in Worcester District Registry of Deeds in July as compared with 1959 in June and 1864 in July, 1909.

4. Copy of mortgage to secure an issue of $5,000,000 in 4½ per cent. gold bonds, given by Worcester Consolidated Street Railway Company to Old Colony Trust Company of Boston, filed with City Clerk Towne.

Industrial

July 21. Norcross Bros. Company awarded contract to build $175,000 army and navy Y. M. C. A. building at Newport, R. I.

25. J. W. Bishop Company receive contracts to build engine house for Quinebaug Company, Danielson, Ct., weave shed for French Textile Company at Mechanicsville, R. I., and addition to plant of Sanford Mfg. Company, Melrose.

August 3. Permit granted Merrifield Building Trust to erect concrete building for manufacturing purposes on Union Street, at estimated cost of $25,000.

8. Rockwood Sprinkler Company buys J. H. Whittle Company plant, Harlow Street, from Worcester County Institution for Savings for $30,000.

18. E. D. Ward secures contract to build three-story concrete tower-house for N. Y., N. H. & H. R. R.

Necrology

July 24. Charles H. Davis, aged 78 years and 4 months, of old age and heat exhaustion, at his home, 43 Cedar Street.

28. Charles C. Fuller, of injuries caused by fall, at City Hospital. His age was 58 years, 11 months and 29 days.

16. Lucian B. Stone, aged 80 years, 11 months and 7 days, at his home, 1030 Main Street, of injuries received by being struck by an automobile.

Grain Rates to New England

Commissioner George T. Bell, of the Commercial Club, is to-day sending to the Interstate Commerce Commission the traffic bureau's intervention in the suit of the Omaha Grain Exchange asking for a proportional rate, that will allow them to sell grain in the New England States. The intervention is brief, setting out that the only rate Sioux City has, is a rate of eighteen cents to Chicago on wheat, and seventeen cents on other grains, which it declares is unjust, and asking that whatever order is made in regard to Omaha be made to apply also to Sioux City.—Sioux City (Ia.) Tribune.

The Worcester Music Festival

Once Again will the Attention of the Musical World be Concentrated upon Worcester, where Famous Artists will Interpret the Great Masters of Melody

THE management of the Worcester Music Festival announces that details are completed for the 53d annual Festival which is to be given in Mechanics Hall, beginning Monday, Sept. 26, and concluding Friday, Sept. 30. There will be five concerts and eight public rehearsals of orchestra, chorus and soloists. The works to be produced are Berlioz's "Faust," the first part of Edward Fitzgerald's "Omar Khayyam," as set to music by Granville Bantock, and Gounod's "Gallia." The artists engaged are: Mlle. Nina Dimitrieff, soprano; Miss Florence Hinkle, soprano; Miss Margaret Keyes, contralto; George Hamlin and Berrick Von Norden, tenors; Herbert Witherspoon and Frederick Weld, baritones; Mme. Maud Powell, violin soloist, and Yolanda Méro, pianist. Mme. Powell will play a Saint Saëns concerto, Thursday afternoon, Sept. 29, and Miss Méro will play a Liszt concerto, Friday afternoon, Sept. 30.

The festival opens Wednesday night, Sept. 28, with Berlioz's "Faust," which presents for soloists, Mlle. Nina Dimitrieff as Marguerite, George Hamlin as Faust, Herbert Witherspoon as Mephisto and Frederick Weld as Bradner. Mlle. Dimitrieff is to make her first American appearance at the Worcester festival, after which she joins the forces of the Metropolitan Opera Company, to which she goes on the recommendation of Jean de Reszke, the famous European singer, who considers Dimitrieff one of the greatest singers in the world. She is young, pretty, born in Russia and educated at the celebrated Smolnas convent in St. Petersburg, being a classmate of the Italian Queen, Helene, whose protege she is. In her earlier years she was a pianist, one of the best in Russia, but her voice gave such promise when she was young that the Italian Queen communicated with the Duchess Liven, the head of the convent, and asked her to take special interest in the pupil. After graduation she pursued her vocal studies, and made her debut in Russia as "Aida." She was received with ovations, everywhere in her own country but her most artistic success is as Marguerite in Faust, the part for which she was engaged for the Worcester Festival. The management made special effort to secure an ideal Marguerite for the great work, and Europe was searched for such an artist. Managers were communicated with, but not until Jean de Reszke recommended Dimitrieff was an engagement made. It is the belief of the Worcester Festival, that it has for this important part in so great a work the best Marguerite in the world. Mr. Witherspoon, who is to sing Mephisto, has not been to the Worcester Festival for several years, but he is recognized to-day as the most artistic baritone in the country, and last season devoted most of his time, with the Metropolitan Opera Company, singing operatic roles, although he is an oratorio singer without an equal. He is considered the best baritone that ever sang at the Worcester Festival.

The programme for Thursday night, Sept. 29, is Bantock's "Omar Khayyam." This is the new work of the Festival and will be known as the novelty work of the Festival of 1910. It is the first time the work has been produced in this country, and on account of its extreme length only the first part, requiring one hour and forty minutes, will be sung. In literature there is no more popular or better known writing than the Rubaiyat, according to Fitzgerald. Granville Bantock, the celebrated English composer, has set it to music and when given in London, in the spring, it was heralded as one of the world's great compositions. The cast for this work is made up of Margaret Keyes, contralto, Berrick Von Norden, tenor, and Frederick Weld, bass. The characters are The Beloved, the Poet and the Prophet. The rehearsals of the chorus on this work have been going on for nearly a year, and Conductor Mees warrants the statement that the Worcester production will fully equal that given in London in the spring, which was the musical sensation of England. In order that Dr. Mees might conduct with absolute correctness he made a visit to London during the summer, where he had a conference with Granville Bantock, the composer, and the entire work was taken up in detail and gone over thoroughly. Mr. Bantock sent word to the Festival through Dr. Mees that he was confident his composition would be given satisfactory representation from his knowledge that Cesar Franck's "The Beatitudes" was given its most artistic presentation in the world at the Worcester Festival. The other choral work to be given is Gounod's "Gallia," which comprises the last part of the Friday night concert, for which Mlle. Nina Dimitrieff will sing the solo part. The conductor of the Festival works and programme is Dr. Arthur Mees, and the orchestral music will be by sixty members of the Boston Symphony Orchestra under the direction of Gustave Strube.

The afternoon concerts will be symphony programmes by the orchestra, with two soloists at each concert. Thursday afternoon the orchestra will play Beethoven's funeral march from the symphony "Eroica," as a memorial to Carl Zerrahn, who was conductor of the Festival chorus for more than a quarter of a century, and who died at his home in Milton, shortly before last year's Festival. At this concert Mme. Maud Powell will play a Saint-Saëns concerto for violin. She is acknowledged the greatest woman violinist in the world, and Henry T. Finck, who is a critic of international reputation, says that while he recognizes her as the greatest woman violinist in the world, he will go beyond that statement and assert that in delightful artistry and really convincing interpretation Maud Powell is the equal of any player alive, regardless of sex, and this statement he says he makes in full consideration of those two marvels, Fritz Kreisler and Mischa Elman. She reaches the heart with more unvarying certainty than either of these two great players. That is the test of a great violinist as it is the test of any great artist. The Festival pianist is Yolanda Méro, the young Hungarian artist, who is a stranger in this country. She played last year in a few recitals and her interpretation of Liszt music places her in the foremost place as a pianist of this great master. She is one of the world's great pianists and in addition has the impetuousness, verve and dash so commonly associated with Hungary.

WORCESTER BOARD OF TRADE
11 FOSTER STREET
WORCESTER MASSACHUSETTS
EACH FOR ALL ALL FOR EACH
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
CHARLES H. BOSWORTH, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MACGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: CHARLES L. GATES.
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

Any member of the Board of Trade having matters requiring consideration by any of these committees is asked to communicate directly with its chairman.

A Vital Month

Untiring and Incessant Has Been the Work of this Board During the Hottest Period of the Year

Although no meeting of the directors of this Board was held during August, the month itself showed absolutely no cessation in the volume of business that has characterized this Board ever since 1910 came in.

Early in the month the necessary preparations were made for the entertainment of the Pilgrim Publicity Association of Boston, which came here Aug. 9th, 300 strong, including both gentlemen and ladies. The party spent the day at Edgemere and Lincoln Park, and the occasion was voted one of the most satisfying in the history of the organization.

The month was devoted principally, however, to more serious matters, two subjects of the utmost consequence to the business life of this community being materially forwarded. One was the proposed inquiry into the alleged excessive charges of the express companies, and the other was preparing for the defence that Worcester in common with the rest of the East is preparing against the proposed advances in class rates, running from 10 to 30 per cent., contemplated by the railroads.

At the very close of the month the shippers in this city were notified that the railroads proposed putting in operation in this territory the uniform code of demurrage rules so called, cutting down the free time for unloading cars from 96 to 48 hours, which this Board is on record as opposing.

On Aug. 31 and Sept. 1, 2 and 3, the Atlantic Deeper Waterways Convention was held at Providence, and this organization, represented by its vice-president and secretary, was the only commercial organization in New England continuously represented from the beginning to the close of this most important gathering.

Taken in connection with the fact that through the efforts of the secretary of this body the New England Corn Exposition, Inc., was provided last month with a general manager brought here from Franklin, Ind., quarters provided in our rooms and an office force created, together with all the detail work of a body of this size, including the issuance of the annual reports and the annual year book, and the consummation of the arrangements to bring here the last of this month Hon. James E. Dunning of Rochester, N. Y., U. S. Consul at Havre, to lecture before this body on Foreign Trade, it can be seen that the month has not been a particularly idle one for either officers or committees.

The Atlantic Deeper Waterways Convention, Consul Dunning's visit, and other subjects properly falling in September's business will undoubtedly be considered at greater length in the October issue of the Worcester Magazine, as will be the latest facts with reference to the great New England corn show to be held here Nov. 7-12, arrangements for which are being swiftly, capably and satisfactorily worked out by the new general manager.

What remains to be specifically considered here is the exact status of the freight rate case, which is, after all, perhaps the most important undertaking in its ultimate effects on this city ever essayed by this Board.

For nearly a year, as the readers of this Magazine well know, the Worcester Board of Trade, in common with twenty-two other Eastern organizations, including the very largest on this seaboard, has been putting forth every effort to protect the shippers in this city from increases in freight rates calculated to materially reduce, if not actually wipe out, the profits in their several lines.

The President of this Board, Mr. Charles T. Tatman, has been untiring in his efforts in this direction. One of the determining factors in his re-election in April last was the fact that the directors unanimously felt that the negotiations he had been instrumental in forwarding as a member of a committee from the Eastern commercial organizations having this whole matter in charge would be seriously jeopardized if he retired from the presidency at this time. His legal knowledge, coupled with his devotion to Worcester and its industrial prosperity, has been of incalculable value to this community in the numerous conferences that have been held in New York between the representatives of the railroads and the representatives of the shippers preceding the formal hearing before the Interstate Commerce Commission, which opened in the metropolis Sept. 7.

From the outset the Worcester Board of Trade has taken the position that any further advance in freight rates was not only calculated to work material hardship to the industries in this city, but was, as a matter of fact, both unwise and uncalled for. It has claimed that its contention in this latter respect was capable of demonstration.

The New York Commercial and Financial Chronicle, a recognized authority in railroad matters, has just completed a summary of railroad earnings from January to July, 1910, showing 380 lines. The total earnings of these corporations, including every leading railroad system in this country, was $1,255,756,276, an increase over the corresponding period of last year of

$159,453,048. This would indicate a gross increase for the year of over $300,000,000 on business done at the existing rates.

No accurate figures are available for the net earnings of the railroads. H. C. Barlow of the Chicago Chamber of Commerce has compiled a five-year table of net railroad earnings, in which he claims that the net earnings of the railroads for the year ending June 30, 1909, were $832,000,000, and he asserts that for the fiscal year ending June 30 last the profits were $94,000,000 in excess of that sum, making the enormous aggregate of $926,000,000 on a business estimated in round figures at two billions and a half of money. If Mr. Barlow's contention is correct, there appears to be no good reason why the railroads should seek to pass along to the shipper the ten per cent. increase in wages that the employes have exacted of them.

The practical effect of the proposed increases on the manufacturers of this city can perhaps be better appreciated after a thorough study of the subjoined table prepared by D. O. Ives of the Boston Chamber of Commerce, chairman of the Committee of Representatives of Eastern Commercial organizations, opposing the advances in freight rates.

OFFICIAL CLASSIFICATION RATINGS.

Articles manufactured in Seaboard Territory, taking Class Rates	RATES TO CHICAGO					
	L. C. L.	C. L.	L. C. L.		C. L.	
			Present	Proposed	Present	Proposed
Agricultural Implements	D1 to R25	5	1.50 to .55	1.80 to .66	.30	.33
Ammunition	2	4	.65	.78	(Commodity Rates)	
Automobiles	D1	110% of 1st	1.50	1.80	.82½	.99
Automobile Parts	4 t to 1	1 to 5	3.00 to .35	3.60 to .40	.75 to .30	.90 to .33
Bagging	R25 & 3	3 & 4	.55 & .50	.66 & .60	(Commodity Rates)	
Baking Powder	3	4	.50	.60	.35	.40
Belting	2	3	.65	.78	.50	.60
Boilers	1 to 3	5	.75 to .50	.90 to .60	.30	.33
Boots and Shoes	1		.75	.90	(No C. L. Rate)	
Box Boards	3	5	.50	.60	.30	.33
Brass Tubing, Sheet, etc.	3	4	.50	.60	.35	.40
Canned Goods	R26	5	.40	.48	.30	.33
Cans	3 t 1 toR25	4	2.25 to .55	2.70 to .66	.35	.40
Carpets	1		.75	.90	(No C. L. Rate)	
Chocolate Candy	R25	3	.55	.66	.50	.60
Clothes Wringers	2	4	.65	.78	.35	.40
Clothing	1		.75	.90	(No C. L. Rate)	
Confectionery	R25	3	.55	.66	.50	.60
Cordage	3	4	.50	.60	.35	.40
Cotton Piece Goods	R25		.55	.66	(No C. L. Rate)	
Crackers	1 & 2	4	.75 & .65	.90 & .78	.35	.40
Crown Corks (Tin Bottle Caps, N.O.S.)	2 & 3	4 & 5	.65 & .50	.78 & .60	.35 & .30	.40 & .33
Drop Forgings	1 & 4	5	.75 & .35	.90 & .40	.30	.33
Drugs and Medicines	1	3	.75	.90	.50	.60
Dry Goods	1		.75	.90	(No C. L. Rate)	
Fire Arms	1	2	.75	.90	.65	.78
Fish, Dried	R26	5	.40	.48	.30	.33
Fish Netting	1		.75	.90	(No C. L. Rate)	
Furniture	4 t 1 to 2	2 to 4	3.00 to .65	3.60 to .78	.65 to .35	.78 to .40
Glue	R26	5	.40	.48	.30	.33
Hardware	3	4	.50	.60	.35	.40
Ice Cream Freezers	1 & 2	3	.75 & .65	.90 & .78	.50	.60
Leather	1 & 2	4	.75 & .65	.90 & .78	.35	.40
Machinery and Machine Tools	3 t 1 to 2	5	2.25 to .65	2.70 to .78	.30	.33
Mill Wrappers (Wrappers N.O.S)	2	5	.65	.78	.30	.33
Oil Cloth	2	4	.65	.78	.35	.40
Oil Clothing	1		.75	.90	(No C. L. Rate)	
Organs and Pianos	1	2	.75	.90	.65	.78
Paper (Various), Paper Bags, Boxes, Dishes, etc.	3	5	.50	.60	(Commodity Rates)	
Papeteries	R25	5	.55	.66	.30	.33
Refrigerators	2	4	.65	.78	.35	.40
Rubber Goods	1		.75	.90	(No C. L. Rate)	
Rubbers	1	2	.75	.90	.65	.78
Saddlery	1		.75	.90	(No C. L. Rate)	
Seeds	1 to 3	3 to 6	.75 to .50	.90 to .60	.50 to .25	.60 to .27
Stamped Ware	1 & 2	4	.75 & .65	.90 & .78	.35	.40
Tags	1 to 3	5	.75 to .50	.90 to .60	.30	.33
Tobacco	D 1 to 1	4	1.50 to .35	1.80 to .40	.35	.40
Toys	1	2	.75	.90	.65	.78
Vegetables	1 to 4	1 & 5	.75 to .35	.90 to .10	.35 & .30	.40 & .33
Vehicles	3 t 1 to 1	R25	2.25 to .75	2.70 to .90	.55	.66
Whiskey, Rum, etc.	R25	4	.55	.66	.35	.40
Wire	2 to 1	1 & 5	.65 to .35	.78 to .40	(Commodity Rates)	
Wire Products	D 1 to 3	3 to 5	1.50 to .50	1.80 to .60	(Commodity Rates	
Woodenware	1	4	.75	.90	.35	.40

Texas and Worcester

The Wonderful Trade Opportunities of the Empire of the Gulf Opening up to the People of this City Should be Fostered Strongly

Hon. Robert Rantoul of Salem, than whom no man stands higher in the business and social world, has just returned from a visit to Texas, which he made as chairman of the Boston Chamber of Commerce Committee charged with investigating the feasibility of establishing a steamboat line from Boston to the Texas ports. His conclusions are of the utmost value to Worcester as well as to Boston. Mr. Rantoul declares:

"I think New England would have to look far to find a more fertile field for trade expansion than that offered in Texas and the Southwest, a country teeming with prosperity, not based on the production of a single thing, but of a great diversity of products which insures much greater stability.

"There are a people enjoying very great material prosperity, who are consumers of nearly every commodity which New England's factories produce, and yet this section supplies but a small proportion of their needs. The enterprise of the St. Louis jobber and to a lesser degree, of Chicago, has made these points the chief dependence of Texas for its supplies; and while this may originally have been caused by transportation conditions, it is no longer so as far as New York is concerned, and it should not be so for New England. It is probable that this very disability, as compared with her New York and Western competitors, has retarded the growth of New England's trade.

"There is every reason why the North Atlantic seaboard should claim this Texas field for its own, and hold it against all comers. Water carriage will always be much cheaper than rail; it frequently figured at a ratio of five to one, and the land carriage at the Texas end, to reach the heart of the county is short. This is bound to insure lower rates in the long run from our coast than from the Central West, a condition which for the past two years has prevailed from New York. The immediate result has been that of building up the local jobber in Texas, who is looking to the Eastern manufacturer for his supplies. Many of these come from New England, but under a great handicap as to rates. I feel satisfied were more direct communication established much greater inroads could be made into the trade of our competitors, and a greater share of the rapidly increasing trade secured, not to mention the advantages of securing in return at minimum freight costs the cotton, wool, hides and other commodities that Texas produces.

"A State which has increased its population something like a million in the last ten years, now having close to 4,000,000, and its wealth in much greater proportion, is worthy of the most careful attention on the part of any producer, who has wares to sell, and I am confident it will not be time lost, if he directs his attention and his energies to this section, if he has not already done so, and that the crying necessity for closer transportation facilities will greatly impress him."

Partly through accident, but largely through design, the city of Worcester is probably better known to the great commercial organizations and to the great commercial world of Texas, than any other city in New England save Boston. And not even Boston has more

friends in the Lone Star State than Worcester. The visit to this city by Senator Bailey in April, followed by the interchange of courtesies between this Board and the state officials of Texas, riveted the eyes of the people of that state upon this city, as they have been focused upon no city in the North for a generation.

Last month this Board through its official publication, the Worcester Magazine, presented the stirring facts, with reference to two of the livest of the Texan cities, and in communications received since from Texas, it appears that the issues of the Magazine containing these articles are being literally devoured by the residents of San Antonio and Houston.

We take no credit to ourselves in all this. This Board has amply seen in advance, what all New England will some day come to see, that this great State, situated close by the Panama Canal is bound to be an empire of its own, with a trade sufficient to support a dozen Worcesters.

It is a wise maxim that men should ally themselves with power, and the men of Worcester will do well if they continue to cement the bonds of friendship so happily forged between this the ideal industrial community of the North and the great commonwealth of the South, whose destiny is bound to be as remarkable as its history is romantic.

Pacific Coast Men Visit China

An Extensive Tour of the Celestial Empire Will Be Made by Representatives of the Associated Chambers of Commerce of the Pacific Coast

Arrangements have been completed by the San Francisco Chamber of Commerce for participating in the coming excursion of the Associated Chambers of Commerce of the Pacific Coast to China, in response to an invitation extended by the commercial bodies of that country some time ago.

The local Chamber will be represented on the trip by President W. L. Gerstle, Robert Dollar and Richard Hotaling. The programme calls for departure on the steamer Korea, August 23d, and in the party will be representatives of the Commerce Chambers of this city, Oakland, Los Angeles, San Diego, Portland, Seattle, Tacoma and Spokane. On the way over the Honolulu representatives will be picked up.

The membership of the party is limited to about fifty, including the wives of some of the excursionists. According to the itinerary, as mapped out, the party will, after arriving at Shanghai on September 16th, visit twenty-two cities in China. Escort will be under the representatives of the Chinese commercial bodies, and every opportunity will be given the visitors to study commercial and other conditions as they exist in the Chinese Empire.

The scope of inspection will also be broadened by assistance which will be given by the consular representatives of the American Government in China, Secretary Knox having notified the consuls officially of the coming of the party and requesting them to show every attention to members.

In anticipation of the visit of the Coast party, the Chinese commercial bodies are reported to be making extensive arrangements for their convenience and entertainment, many affairs being arranged in their honor.

A feature prepared by the visiting representatives, which they think will be appreciated in China, is a series of booklets descriptive of the various sections which the travellers respectively represent. These booklets, which will be profusely illustrated, will be printed with both English and Chinese text, and will be distributed freely wherever visits are made.—San Francisco Chronicle.

Railroad Development in Oregon

Two Great Systems Are Now Spending $50,000,000 in that State

Those were striking figures presented at the Commercial Club meeting by Mr. McMurray, of the Harriman system, showing in detail the expenditures being made in Oregon by the Harriman lines, says the Portland Oregonian. All of the projects mentioned are actually under way, and most of them, and possibly all of them, will be completed within a year. The total cost reaches the immense sum of $26,255,000. The widespread distribution of this vast sum through the state, where a large proportion of it will go for labor and supplies secured locally, is in itself sufficient to bring great prosperity; but when it is noted that the Hill interests, in practically the same field, are also spending perhaps an equal number of millions, it is very easy to understand why this state is now enjoying the greatest prosperity it has ever known.

While the Harriman system, as shown by the figures presented by Mr. McMurray, is building new lines and branches in all the best traffic-producing regions in the Northwest, the Hill system is equally enterprising. The completion of the $50,000,000 North Bank line has been followed by the Oregon Trunk, which will add several hundred miles of railroad in a region that is now without rail facilities. The Tillamook and Nehalem country, in which the Harriman forces have the start with a steam road well along towards completion, will be reached by the Hill system with an electric line; and in the Willamette Valley the elaborate system of the Oregon Electric is being improved and extended. These new projects, together with numerous logging railroads and extensions of suburban lines, will easily bring the total cost of the work now nearing completion and projected well up in excess of $40,000,000. It is not, however, from this enormous expenditure for "first cost" of the lines that the city and state will reap the greatest benefits. That figure, immense as it seems, is small in comparison with that which would be needed to represent the direct tangible growth and development of the state, to follow completion of these lines. All of the railroad-building that has taken place in the State in the past twenty years preceding the commencement of the present activity has failed to open up as large a territory, as will come into direct touch with Portland, as soon as the many great projects now under construction are completed. Railroad development in Oregon was long deferred, but it is coming with a rush, and it is bringing with it the most prosperous times we have ever known.

The promotion committee of the Portland (Ore.) Commercial Club is urging the City Council to place before the voters of the city a bill authorzing a municipal bond issue of $500,000 for the purpose of erecting a convention hall to seat 15,000 people.

From the Field

Brief Notes of the Activities of Many Commercial Organizations

The Oakland (Cal.) Chamber of Commerce has perfected plans for a new home to cost $300,000.

H. E. Stout of Des Moines is the secretary of the recently-formed Iowa Federated Commercial Clubs.

Vandergrift, Pa., has a new commercial body known as the Vandergrift Business Men's Association.

The New Brunswick (N. J.) Board of Trade has filed articles of incorporation.

J. H. Johnson has been elected manager of the Oklahoma City Chamber of Commerce to succeed A. W. McKeand, resigned.

The Chamber of Commerce and Business Men's Association of Springfield, Ill., are discussing plans for the consolidation of the two organizations.

The Canton (Ohio) Board of Trade has secured a new industry in the Moore Heating & Manufacturing Company, a $200,000 corporation.

Secretary D. F. Williams of the Youngstown (Ohio) Chamber of Commerce has found it necessary to resign his office and go West in an effort to regain his health.

Sidney T. Braman of Schenectady, N. Y., has been selected as the Secretary of the recently-organized Board of Trade of Pittsfield, Mass.

The Board of Trade and the Retail Merchants' Association of Lancaster have united in a Chamber of Commerce with an initial membership of 800.

W. R. C. Kendrick, secretary of the Keokuk (Ia.) Commercial Club, has been nominated for the position of Judge of the Superior Court.

The President of the Buffalo Chamber of Commerce and Manufacturers' Club has chosen a committee of 100 to direct the affairs of Buffalo's third annual industrial exposition, which will be held Oct. 3d to 15th.

The Geneva (N. Y.) Chamber of Commerce recently inaugurated a campaign for a guarantee fund with an address by Secretary Larrabee of the Williamsport (Pa.) Board of Trade.

The Birmingham (Ala.) Chamber of Commerce will ask the support of the commercial clubs and industrial associations of the state to secure legislation appropriating $50,000 to be used in advertising Alabama.

Sixteen cities and towns have united in forming a South Florida Board of Trade. Headquarters will be established in Jacksonville for the dissemination of literature and information to homeseekers. An exhibition of products will be maintained.

The object of the Gophers, a new Minneapolis and St. Paul organization, is thus set forth in its constitution: "The object of the Gophers shall be to dig for the Twin Cities within the state, and for Minnesota without the state at every time and every place an opportunity presents itself."

The Board of Trade of Bristol, Tenn., has issued a call for a conference of several hundred business men of southwest Virginia, eastern Tennessee and western North Carolina, the object of the conference being to more thoroughly advertise the natural wealth of the territory named and to bring the people into close touch in development work.

The Helena (Ga.) Business League is one of the late additions to the ranks of commercial organizations.

Walter H. Reed has been elected secretary of the Board of Trade of Schenectady, N. Y.

The Phœnix (Ariz.) Board of Trade is to have a new building this fall.

The business men of Demopolis, Ala., have formed the Demopolis Business League.

The Cairo (Ill.) Commercial Association is after new factories and is raising a fund of $5000 to hire a secretary to lead in the good work.

The newly-organized Carlisle (Pa.) Board of Trade has shown its effectiveness by bringing to the town the Cooper Heater Company.

The Business Men's Club of Memphis, Tenn., is to issue a new magazine called the "South To-day," for the purpose of booming the city.

Three hundred new members is the result of the recent campaign of the Birmingham (Ala.) Chamber of Commerce.

The new Janesville (Wis.) Industrial and Commercial Club has selected as a slogan, "You'll succeed in Janesville."

The Pine Bluff (Ark.) Board of Trade is raising a bonus of $100,000 to bring the Memphis, Dallas & Gulf Railroad to that city.

The South Bend (Ind.) Chamber of Commerce has removed its offices to the new Studebaker building, where it has a finely-furnished home on the second floor.

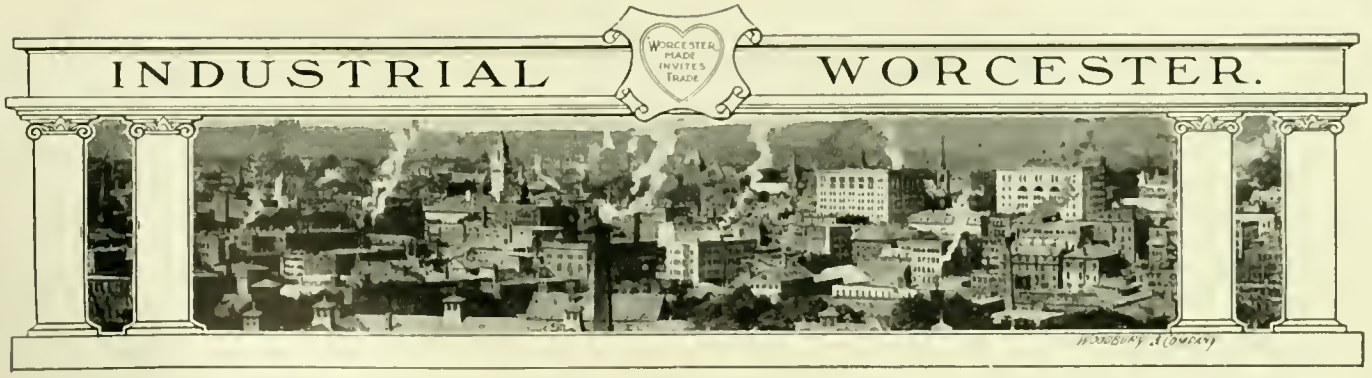
A. W. McKeand, secretary of the Oklahoma City Chamber of Commerce, has resigned to accept a similar position with the Chamber of Commerce of Charleston, S. C.

The raising of a large portion of a publicity fund of $25,000, and the publication of 5000 pamphlets to advertise the city, were some of the August activities of the Birmingham (Ala.) Chamber of Commerce.

The Bemidji (Minn.) Commercial Club is looking for a secretary who is a "thirty-third degree booster." The club has several propositions under consideration which have been lying dormant since the resignation of A. H. Jester as secretary.

The Athens (Ga.) Commercial Club is engaged in raising $50,000 to insure the building of a traction line to be known as the Hocking-Sunday Creek Traction Company. The total length of the line will be thirty miles, the estimated cost of construction $419,450, and gasoline motor cars will be used.

Richard W. Freeman has been elected secretary of the Gloucester (Mass.) Board of Trade to succeed Edward K. Burnham, who has held the office for twenty-one years. Mr. Burnham retains the other offices which he held, and Mr. Freeman becomes the first permanent secretary, devoting his entire time to the duties of the position.



The Lincoln Theatre

An old Worcester landmark, the Lincoln House, is no more. In its place will soon stand a 20th century playhouse, one of the finest in the country.

The Lincoln theatre, so named in commemoration of two men of note—Abraham Lincoln, a beloved President of our nation, and Levi Lincoln, an able Governor of our state—is being here erected by Frederick W. Mark for the Worcester Amusement Company.

This site, extending from Elm Street to Maple and only a step from the busy rush of the city's principal thoroughfare, is happily chosen. The lot is almost precisely 127 feet square.

It is the statement of its owners that it will be superior to any theatre in New England. Certain it is that no effort has been spared and no detail overlooked that will aid in the complete realization of this ambitious project.

A month was consumed in the quest for architects fitted by experience and reputation to draw the plans for a building which is to be the last word in scientific theatre construction. The final choice was Leon H. Lempert & Son of Rochester, N. Y., who have specialized in this line of architecture and have to their credit over one hundred attractive theatre buildings.

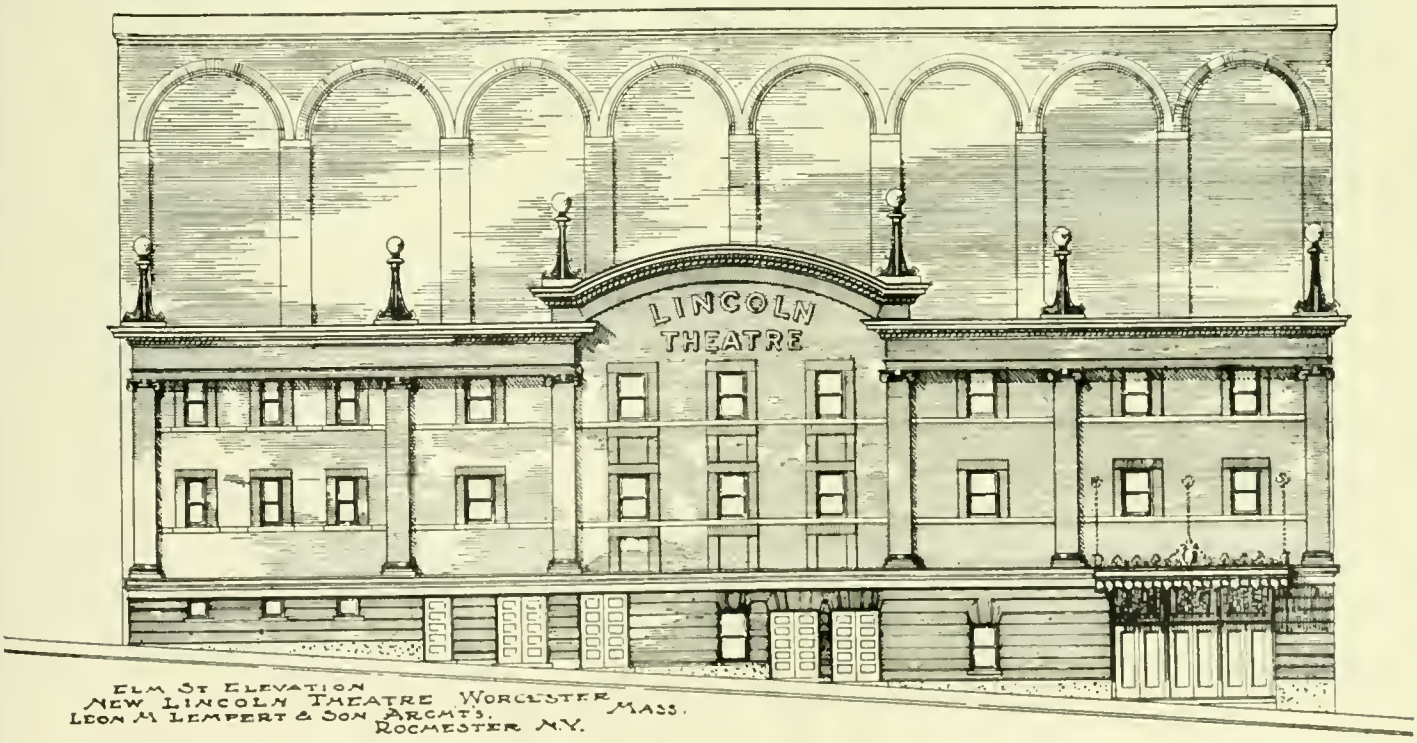
A faint conception of the external appearance of the structure they have designed is shown by the accompanying illustration which is made from the architects' sketch. The material of this portion will be yellow iron fire spot brick with sandstone trimmings. Wherever possible, steel, concrete and brick will be the materials employed and the latest ideas in fireproof construction will prevail. Facing upon two streets, an unusually large number of emergency exits will make this theatre as safe as human ingenuity can devise.

The stage will be 127 by 40 feet; proportions of which but few theatres in the country can boast and much larger than any in New England with possibly two exceptions. It will measure 100 feet clear between dressing rooms and the height will be 70 feet. The opening of the proscenium arch will be 52 by 38 feet. On the stage and throughout the house will be found every improvement that utility, comfort or convenience demands. Every artifice that adds realism to the production of the modern play will be found here, even to a swimming tank in the center of the stage.

There will be nine boxes on each side of the stage, arranged in three tiers of three boxes each. The view from the boxes will be unobstructed, as the box nearest the stage will be two steps and the middle box one step lower than the most distant one. Unobstructed, too, will be the view from every seat in the huge auditorium as the balconies will be built on the cantilever principle and there will be an entire absence of supporting pillars.

The orchestra floor will be of concrete overlaid with wood and will be supported by numerous columns in the basement. The seating arrangements are unusual. A space of two feet eight inches between the backs of the seats and the backs of the row in front will give access to inner seats without compelling those already seated to rise. The seats will be twenty inches in width; in older theatres they are usually eighteen inches, occasionally nineteen. Along portions of the aisles, seats twenty-one, twenty-two and twenty-four inches in width will be provided for patrons of unusual stoutness. Those afflicted with deafness will enjoy the audiphone system which is to be installed.

A unique and attractive feature will be loges along the front of the first balcony. Here will be found some of the best seats



ELM ST ELEVATION
NEW LINCOLN THEATRE WORCESTER MASS.
LEON H LEMPERT & SON ARCHT'S.
ROCHESTER N.Y.

in the theatre. The view from the balcony will not be obstructed as the loges are one step lower than the first row of balcony seats.

A beautiful and commodious reception room for ladies will open from the lobby. Below will be an equally attractive smoking room for gentlemen.

The seating arrangements will provide for 3000 people, about the same as the great Boston Theatre. Few playhouses in this country will equal it in this respect. The ventilation and heating installation will be according to the best modern practice. The previously demonstrated skill of the architects augurs well for its acoustic properties.

Provision is made in the plans for the addition later of a roof garden to accommodate 1700 people. The location is admirable for this purpose and when it is an accomplished fact, Worcester will have a notable addition to its summer amusement places.

The stage is adequate for the most elaborate theatrical entertainments, but the theatre will be conducted solely for the production of the highest class of vaudeville.

A contract has been made with William Morris, Incorporated, of New York City, for booking attractions. This will insure the finest obtainable talent, not only in this country, but in Europe, through Gibbons, the great London booking office with which Morris is affiliated.

The Worcester Amusement Company now operates the Pleasant and Bijou theatres in Worcester and Lynch's theatre in Woonsocket, Rhode Island. Negotiations are under way for the acquisition of other theatre properties.

The officers and directors of the Company are as a rule prominent Worcester men. Edwin W. Lynch, president and treasurer, is the executive head.

Merchants' National Bank

The fifth year of Worcester's youngest bank, the Merchants' National, has been marked by the acquisition of a home of its own.

October 4, 1909, it purchased the Leland building at 446 Main Street. This was torn down, a new foundation put in, extending fifteen feet below the former one and a new building erected thereon at a total cost for site and building of approximately $250,000.

R. Clipson Sturgis of Boston was the architect and Norcross Brothers Company of Worcester the builders.

The front of the building is of an unusual style for bank structures, as is shown by the illustration, and is a noticeable change from the frowning exterior so much in vogue in bank construction. Marble, reinforced concrete and steel were used in the construction, and aside from a minimum of wood fitting, the building is fireproof throughout.

Merchants' National Bank

The first floor is 90 by 20 feet and 27 feet high. Here provision is made for the officers and tellers. The wainscoting is of pavannaza marble, the base of black Belgian marble and Tennessee marble forms the floor. The paneled walls are decorated in white and cream, and attractive designs in stucco ornament the ceiling.

A heavy bronze grill surmounting beautiful marble wainscoting separates the tellers from the bank's patrons, and grill partitions form separate cages for each teller. The shelf at each window is of black sanitary glass and heavy plate glass shelves are provided for the use of customers. Here, and with few exceptions throughout the bank, the woodwork is of mahogany. Seven windows are used by three receiving tellers, two paying tellers, a teller for notes and collections and another for statements and foreign exchange.

Beyond the tellers are accommodations for the bank's officers, and in the rear is a private room, tastefully finished in chestnut, for the use of the president. The tone of the entire main banking room is one of quiet elegance, quite in accord with the appearance expected of an influential but conservative and properly managed banking institution.

Each cage is locked by its occupant, and six strong boxes are used to protect the cash and securities. Each night these are carried to the vault in the basement by means of an automatic elevator. This elevator is started and stops at any desired floor when a button bearing the proper designation is pushed. When any elevator door is open, it is impossible to start the motor.

A mezzanine floor in the rear provides space for the ledger clerks and bookkeepers. Here is installed a separate vault for books and papers. A large skylight on the second floor composed of glass and wire mesh furnishes a copious amount of light to the main banking room. The front of the second floor contains the directors' room paneled in oak, with mahogany furniture made from special designs. In the rear are the quarters of the check tellers.

A telautograph system furnishes a ready means of communication between the different departments of the bank. On these machines the message is received in fac-simile of the handwriting of the sender. This renders possible the instant transfer of memoranda or accounts in a silent, speedy and accurate manner.

In the basement are the great vaults. The safe deposit vault is the larger and is 32 feet long, 13 feet wide and 8 feet high. The vault is composed of two feet of concrete and chrome five-ply steel, 3¾ inches thick. Back of this vault, and constructed in the same manner, is the vault for the cash and securities of the bank itself. The dimensions of this vault are 14 feet by 17 feet 6 inches.

The total weight of the steel in the vaults is 242 tons. The steel in the vestibule of the safe deposit vault weighs 45 tons, and the circular doors, of a diameter of 8 feet 6 inches, weigh 20 tons, the huge crane hinges weighing two tons. The inner door is 4 inches thick, and the outer 14 inches. The latter is provided with four time-locks and two combination locks, which together serve to operate twenty-four solid steel bolts, each 3½ inches in diameter. The door to the cash vault is of identical construction, with the one exception that it is square instead of circular.

Within the concrete of the vault walls is a fine mesh of wires. Any contact with these sets in motion the alarm system installed by the Bankers' Electric Protective Company of Boston. To safeguard against tunneling beneath the vaults, a space of four feet is left open below them and a lighting system, with reflecting mirrors renders visible the entire under surface.

Fifteen booths in polished mahogany furnish privacy to the lessees of the safe deposit boxes. One thousand of these are now installed and the plans allow for the addition of three thousand more. A portion of the basement has been made into a ladies' room, with every comfort and convenience provided therein to render it attractive.

Mr. Sturgis, the architect, for more than ten years has specialized in ventilation, many large school buildings and similar structures having been equipped with ventilating systems from his plans. He has applied here the results of his large experience and electric fans for intake and outflow, with a system of air ducts, provide for a complete change of air in the whole building every three minutes. The current of air is regulated by rheostats in connection with the fans.

Time and again in the columns of this Magazine have we had occasion to refer to the beautiful buildings erected by that widely-known Worcester concern, the Norcross Brothers Company, and it suffices to say that in the construction of this building they have added one more to the notable achievements that have given them a country-wide prestige.

February 6, 1905, the Merchants' National Bank first threw open its doors for the transaction of business. It then occupied the street floor of the People's Savings Bank building, 452 Main Street. Five people constituted its banking force at that time: D. D. Muir, president; A. G Davis, cashier, and three tellers and clerks. It started with a capital of $500,000, a surplus of $250,000, and no deposits. In five years its working force has grown to number twenty-five, its total assets from $750,000 to $5,460,256, and its deposits have reached a high-water mark of $3,650,260.

The inadequacy of its former quarters prevented for a time the extension of the bank's services in certain directions, but when the bank's own home was designed, plans were made to add two departments. The opening of the new building, August 22d, found these two departments ready for business They are the safe deposit department, Leon Rice Partridge manager, with Geo. F. Mathews as assistant; and the foreign exchange department, which does a general business in foreign exchange, letters of credit and travelers' checks.

The rapid growth in the extent of the bank's assets and operations, and of its influence, is partially explained by the following statement of President Drury, in which he tells somewhat of the method by which its business is conducted, and its depositors protected, as well as some portions of its history and plans:

"When the Merchants' National Bank was started, its stock was largely held by interests outside of Worcester, but so much of its stock has been bought by its directors and other Worcester citizens that I believe I am stating the truth when I say that today more of its stock is owned locally than that of any other Worcester banking institution.

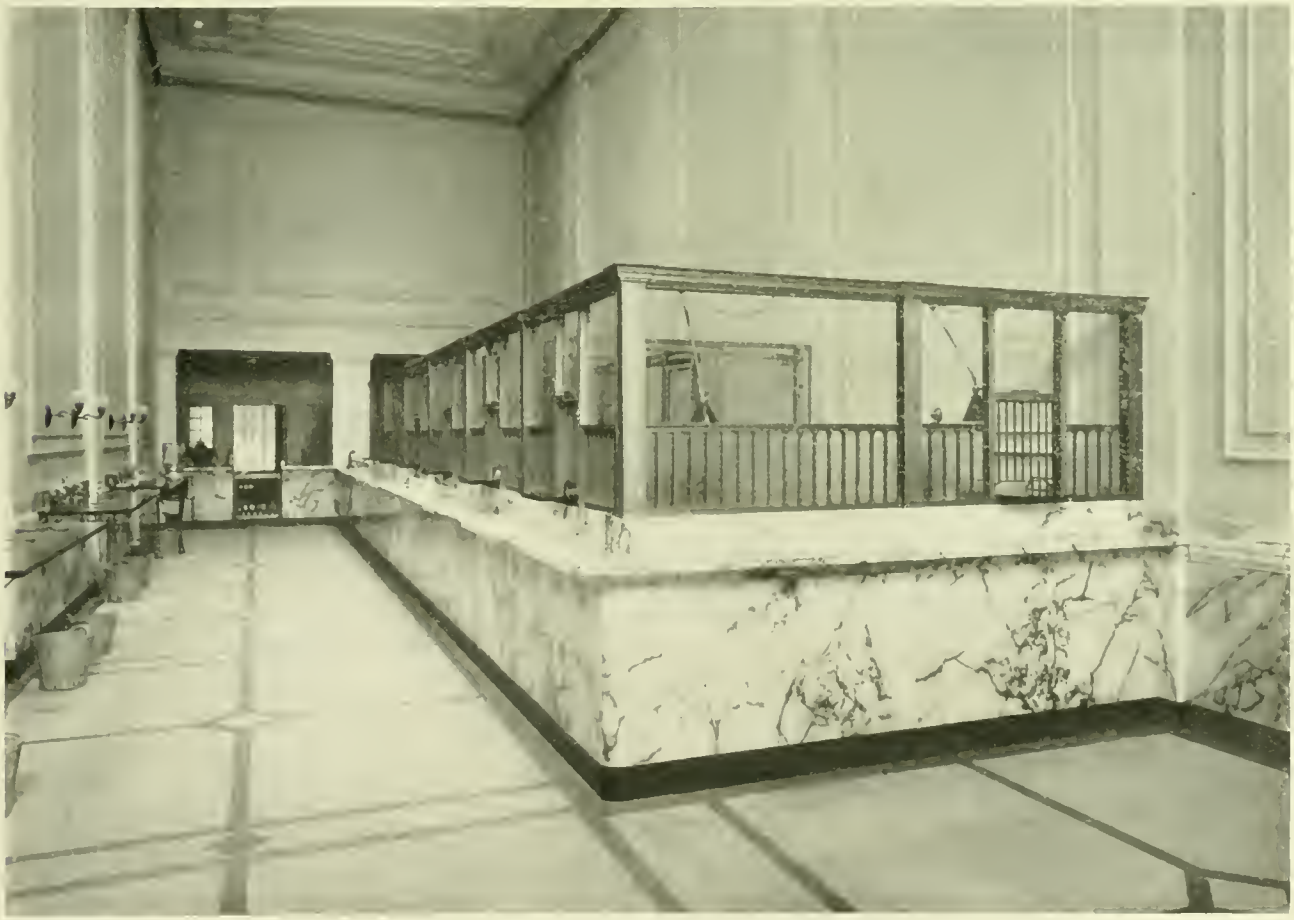
"The bank has paid 8 per cent. dividends per annum to its stockholders, and in addition has accumulated undivided profits amounting to $185,000, nearly enough to pay for its new banking house with its equipment of safe deposit boxes.

"It has been its policy at all times to keep its assets clean, and with this end in view it has charged off all such items as furniture and fixtures, premium on bonds, and all past due paper on which there has been any question of collection.

"To protect its depositors, an examination has been made four times each year by a committee of directors, the personnel of which has been changed each time. Twice each year an examination is made by the regular national bank examiners. In addition the directors have decided to secure chartered accountants to conduct from time to time examinations. The first of these special examinations occurred March 25th of this year, when Marwick, Mitchell & Company of New York spent several days inspecting the most minute details of the bank's transactions. This firm was engaged on account of the enviable reputation it had made in its banking department. They are now examining over 120 national banks and the clearing houses in several of the larger cities retain them to examine all the banks included in their membership.

"To provide for future growth the bank, on March 30, 1910, purchased from the John D. Baldwin estate the property at 444 Main Street, adjoining its new building. This gives us a desirable site in the business heart of Worcester."

The officers are: Frank A. Drury, president; Clarence A. Evans,



Main Banking Room of Merchants' National Bank

vice-president; Alonzo G. Davis, cashier; and Charles S. Putnam, assistant cashier. The directors are: Charles L. Allen, Chandler Bullock, Richard C. Cleveland, Frank A. Drury, Homer Gage, Richard Healy, J. Lovell Johnson, T. S. Johnson, Lucius J. Knowles, D. D. Muir, Henry E. Whitcomb, Henry T. Whitin, George C. Whitney and Oliver B. Wood.

New Kerosene Engine

A brand new wrinkle in the engine line, which its inventors declare is destined to prove extremely valuable to automobilists and motor-boat enthusiasts, is an internal combustion engine, using kerosene as fuel, now being perfected by two Worcester mechanics, Carl Anell and Otto Pearson. Although designed primarily for the use of kerosene, and for motor vehicle purposes, the engine can also be operated by gasoline or denatured alcohol, and applied to stationary and marine engines.

The engine, which was built by Messrs. Anell and Pearson, in a Beacon Street machine shop, has been subjected to extensive and rigorous tests, with what its inventors consider most excellent results. These tests are said to have failed to show any signs of carbonaceous deposits due to the use of kerosene, and to have demonstrated that when used for automobile purposes it will consume a trifle less than a pint of kerosene per hour for every horse-power of the engine's capacity.

The difference in price between kerosene and gasoline will make a saving of value to the purchaser. The engine further reduces the cost of motoring by eliminating the electric spark and the usual ignition apparatus.

The engine is now undergoing a series of tests in Providence under the direction of Mr. Pearson, and will later be brought back to Worcester for further experimental work, after which its manufacture will be undertaken by a corporation which its inventors contemplate organizing as soon as sufficient interest has been aroused in the project. The necessary financial assistance is said to be in sight, so that the establishment of a new local enterprise closely allied to the motor industry seems assured.

Merchants' National Bank Safe Deposit Vault

Four distinct improvements are claimed in the construction of the engine; an inlet valve, a vaporizer, an igniter, and a water-cooling device. The mechanism of the inlet valve differs somewhat from the conventional automatic valve construction in that instead of the spring being located directly around and acting upon the valve stem to keep it seated, a small bell crank is used. Knife edges at the end bear against a collar on the valve stem, while at the other a sensitive spring, the adjustment of which can be varied by an adjusting nut, serves to keep the valve seated.

Two passages lead to the inlet valve seat, one designed for the use of gasoline and the other for kerosene. The volume of fuel admitted will vary within limits determined by two needle valves and a controller valve in the kerosene fuel pipe.

When the inlet valve is properly seated, both passages are closed, and as soon as it opens, which the delicately adjusted valve spring makes possible the instant there is even the slightest degree of vacuum in the cylinder, the fuel, depending upon whether the gasoline or kerosene tanks are connected to the inlet valve casing and passages, will spray into the cylinder and mix with the air taken in through the valve. When gasoline is consumed, electric ignition by regular sparkplug follows, but for use with kerosene a special igniter is provided which fires the charge by the heat imparted by the explosions.

To run the engine on kerosene, the first step after shutting off the gasoline supply is to heat the igniter with a torch, a pipe that leads into the interior serving for this purpose. When the proper temperature is reached, the controller, which is interposed in the pipe conveying the kerosene from the tank to the inlet valve seat, is opened to a stated point and the engine is started in about the same manner as any internal combustion motor. As the kerosene is sprayed from the inlet valve seat it strikes a vaporizing plate, which has been raised in temperature by the heat of the gases, and is vaporized, forming an explosive mixture in connection with the air taken in through the valve.

The igniter, composed of two sleeves, is so designed as to be quickly raised to incandescence, firing the charge immediately, so that the proper degree of compression is obtained, making possible regular ignition without the use of electrical energy.

Another novel feature of this engine is a pulsation pump for circulating water by exhaust pressure. The internal construction of this pump is very simple, a casting which serves as the body being connected with a radiator, and so cut out above one valve that the top of the latter is surrounded by water. The upper portion of the pump body serves as a cover and is connected with the water jacket. Two pipes join above the pump and then are connected with the exhaust pipe above the water level. The water is let into the pressure chamber through the valve at the bottom, this valve also acting as a check valve to prevent the water flowing back. A second valve admits the water to the water jacket and also prevents it flowing back into the radiator.

Before the engine is started the water is at the same level. The concussion from the first explosion forces the water through the perforated seat of the first or top valve into the water jacket. When the pressure has been spent, that valve is closed and the water remains in the water jacket, while the lower valve is opened by the pressure or head of the water in the radiator, and the chamber is filled. The next explosion closes the lower valve, the action being assisted by a very sensitive spring, and the upper valve is again lifted by the pressure under it and another charge of water is forced into the jacket.

In short, the pump consists simply of two valves automatically operated from the operation of the concussion of the exhaust, and as their action is checked to a certain extent by the water surrounding them, no pounding or undue unnecessary wear of either valves or seats results. Light springs assist in closing the valves promptly.

It is claimed for this pump that as spent gases are used no power is taken from the engine, as in the case of a mechanically operated gear or centrifugal pump, and that there is no wear or friction of parts, no packings to leak, and the supply of water or rate of circulation is automatically governed by the engine speed in just the same manner as though a positively driven pump were brought into use to cause movement of water.

Merrifield Building

The new Merrifield building on Exchange Street is the pioneer reinforced concrete construction in Worcester.

The building was erected by the Trustees of the Merrifield Building Trust, designed and constructed by Simpson Brothers Corporation, engineers and contractors of Boston, under the immediate supervision of Mr. H. B. Andrews, Mem. Am. Soc. C. E., their designing engineer.

The building is located on Exchange Street, corner of Union, is 90 feet long, 32 feet wide and four stories in height. The floors are designed to carry a live load of 250 pounds per square foot, according to formulae and tables prepared from the

American Society of Civil Engineers, American Society for Testing Materials, American Railway Engineering and Maintenance of Way Association, and the Association of American Portland Cement Manufacturers.

The floors are carried on three interior concrete columns, spaced 20 feet on centres lengthwise of building and 16 feet on centres crosswise. One centre girder between columns carries the intersecting beams and these in turn carry a 6-inch seat all of reinforced concrete and laid in one operation and thoroughly tied together so that all joints and cracks are avoided in any one floor. All floors have a smooth cement finish, obtained by finishing the concrete with a patented tamper and then trowelling, and without the customary one inch of granolithic top.

It was desirable to distribute the loads on the footings as widely as possible by means of reinforced concrete spread footings, covering such an area that only one and one-half tons per square foot would be the greatest possible load to which they would be subjected, even if every square foot of the building was loaded to its maximum of 250 pounds per square foot.

The reinforced concrete elevator shaft is outside the building, the stair well and stairs are concrete, and shut off from the main building at each floor by fire doors to standard specifications. An outside fire escape is provided on the east end of the building.

The only wood used in the building includes the window frames and sash, offices and toilet partitions.

The economic advantages of reinforced construction are its absolute fire-proof qualities, its adaptability to the maximum window area, its strength and rigidity and entire freedom from vibration from high speed machinery.

Since it is generally recognized among manufacturers that general efficiency of workmen is proportional to the light by which they work, the skeleton construction of concrete was used, permitting the filling in the panels between narrow exterior columns entirely with glass.

The concrete was composed of a standard brand of Portland cement, crushed granite through one and one-half inch mesh, and coarse clean sand, special care being taken to exclude all foreign matter.

The reinforcement used was mainly corrugated bars so designed as to take care of both the positive and negative bending movements and shear and build up in a unit system on the job before placing in the forms to prevent any displacement of it while the concrete was being poured.

The foundation concrete was mixed in the proportion of one part of cement, two and one-half parts of sand and five parts crushed granite, and the concrete above the foundation was mixed in the proportion 1 : 2 : 4.

The building is thoroughly equipped with steam heat, electric power and electric light, plunger elevator and mechanical hoist.

As soon as the building was completed it became the manufacturing home of one of Worcester's important industries, which has become a dominant factor in the uplift of textile machinery under the name of the Worcester Warp Compressing Machine Co.

The Trustees of the Merrifield Buildings Trust are Henry K. Merrifield, 100 Exchange Street; former Congressman Hon. Samuel L. Powers, 101 Milk Street, Boston, and Leslie C. Wead, trustee of several of the leading realty trusts of Boston, 35 Congress Street, Boston, which is also the Boston office of the Trust.

Merrifield Building

Central Autogenous Welding Company

The Central Autogenous Welding Company, 73 Union Street, began business Sept. 1. Steps have been taken to incorporate the company. Both of the active heads of the company, John A. Braithwaite and Walter Winton, have been working in the metal trades from their apprentice days. Mr. Braithwaite, who will have charge of the welding department, has been doing autogenous welding from its first introduction and for the last two years has been foreman of the welding department of the Stevens-Duryea Automobile Company. Mr. Winton has been for five years a toolmaker and machinist for the same concern and will take charge of similar work in the new company. They have installed an adequate equipment of the latest design and are already very busy with work sent in from many points.

When the writer visited their plant, they were busily engaged in building up the teeth of a 6-foot steel gear-wheel which had been machined off too much. Mr. Braithwaite stated that this $300 gear-wheel would have been a total loss, but for this new method of welding.

Continuing he said, "We are prepared to weld steel, cast iron, aluminum or any metal with this marvelously powerful flame (6300° F.). Its uses are manifold. A large field is found in the automobile trade. Broken pressed steel frames can be welded without dismantling the car; metal can be built on to increase strength or replace wear; worn and scored journals and squares on shaft can be built up; machine parts accurately lined up; and all such cast iron parts repaired, such as cylinders, cracked water jackets, broken flanges and cylinder walls and defective valve seats.

"The welding of iron and steel by this process should not be confused with brazing. A true weld is made by this intense heat and the metal used is identical with that of the part being repaired. Because of this fact we are enabled to save much valuable machined work."

The company have found the field for this work in Worcester much more extensive than they had anticipated and are now planning additions to their equipment.

The capital stock of the proposed incorporation will be $50,000, and the charter will be secured under Massachusetts laws. The officers of the new company will be: President, George C. Jenner, West Upton; treasurer, Ralph H. Howe, Worcester; Clerk, George W. Faulkner, Brookline. When this plan is fully carried out and the shop completely equipped to meet every exigency that can arise in such varied repair work, the company will have a plant second to none in their line.

Mr. Braithwaite and Mr. Winton are both practical mechanics of long experience and the concern is a useful addition to Worcester's long list of industries.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building
Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

WOOD CARVING MODELING

Everything from the idea to the finished product.

Models for Wood, Stone, Metal, Plaster, Cement.

L. C. HAMILL

94 Commercial Street

WORCESTER, - - MASS.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE Illustrated

THE OFFICERS AND EMPLOYEES OF THE ROYAL WORCESTER CORSET CO.
Their Combined Skill Has Given Worcester World-Wide Fame

OCTOBER, 1910

$1.50 per year | Published by the Worcester Board of Trade | 15 cents the copy

WORCESTER, MASS., U. S. A.

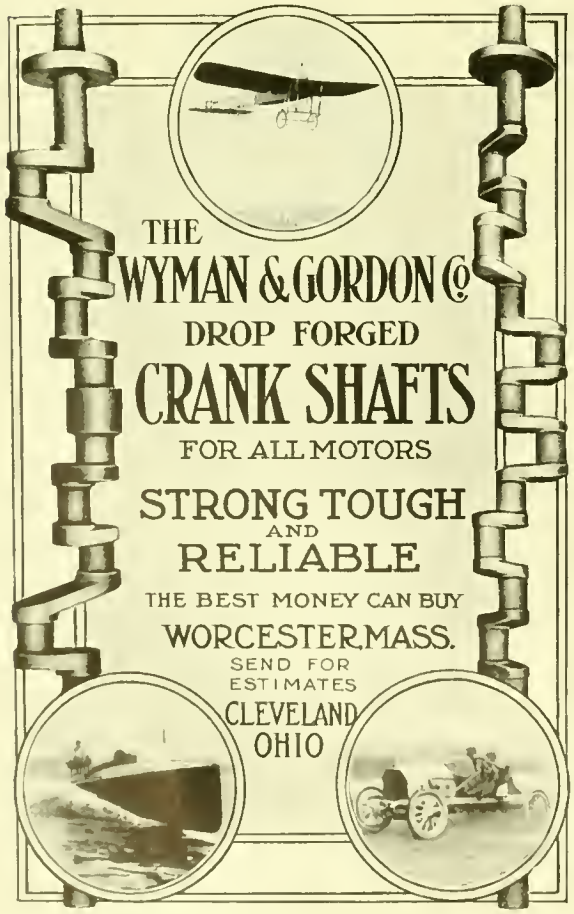
Lincoln Square Garage

Corner Lincoln Square and Union Street, WORCESTER, MASS.

Sole Worcester Agent for Emblem Motorcycles

Storage
Supplies
Repairing

M. Peterson, Proprietor

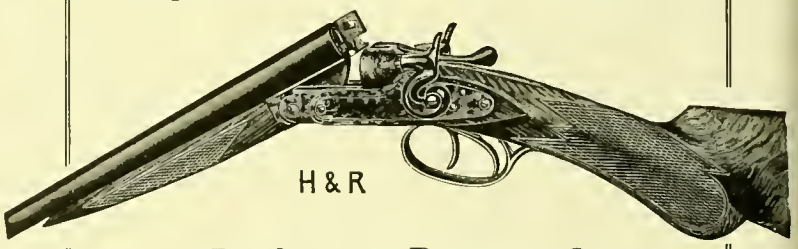


TRADE H&R ARMS CO. MARK

Established 1871

Incorporated 1888

H&R ARMS Co



Isn't it a Beauty ?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

28-gauge, 28-inch barrel, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply, order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. OCTOBER, 1910 No. 10

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Edwin N. Benchley, Advertising Manager.

CONTENTS

THREE OLD WORCESTER BOOKS—Volumes Typical of the Work of Isaiah Thomas—By Dr. Charles L. Nichols, 269-275

MODERATE COST HOUSES—The Albany Committee and its Investigations, 276-280

THE DAY OF OPPORTUNITY FOR AMERICAN MANUFACTURERS—Portions of the Address by Hon. James E. Dunning, 281-282

THEIR THREADS OF LIFE ARE SPUN—The Life Stories of Charles L. Gates and Henry W. King, 283-284

EDITORIAL REFLECTIONS, 285-287
What is a City for?
The Providence Convention.
The Duty of the Hour.

DEPARTMENTS, 288-289

BOARD OF TRADE COMMENT, 290-291

INDUSTRIAL NOTES, 292

PLANERS

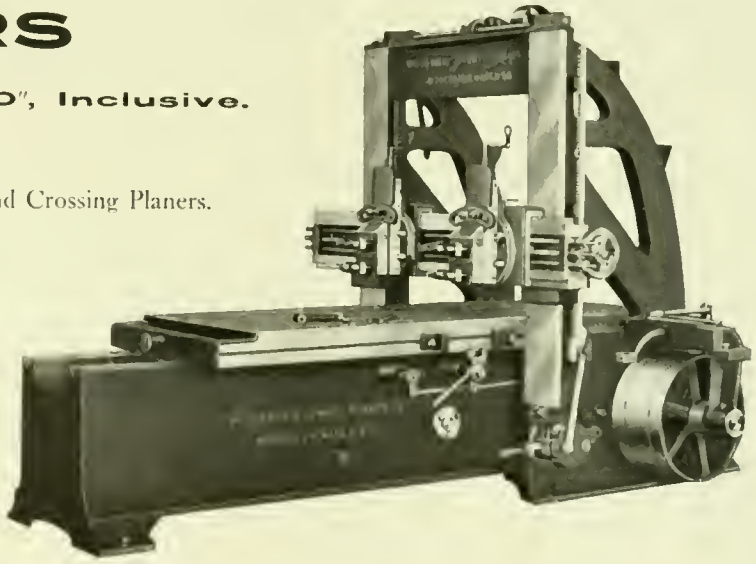
Sizes: 24" x 24" to 60" x 60", Inclusive. Any Length.

Textile Feed Roll Fluting Planers. Frog and Crossing Planers.
Switch Point Planers.
Locomotive Connection Rod Planers.

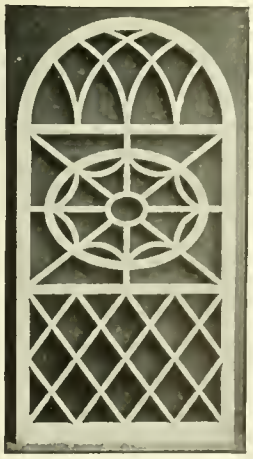
MANUFACTURED BY

Woodward & Powell Planer Co.
Worcester, Mass.

ESTABLISHED IN 1887.
Made in Worcester.



Does Five Times as Much Work as Could be Done in the Old Way.



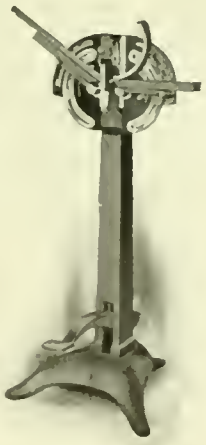
The Heald Machine Co., Worcester, Mass.
Gentlemen:—We have been using one of your "American Sash Trimmers" constantly for the last two and a half years, and are perfectly satisfied with its work.
It is a great labor saver, doing five times as much work as could be done in the old way, and doing it cleaner and better.
Yours very truly, Mohawk Valley Lbr. Co., Fultonville, N. Y.

The letter only tells of entire satisfaction. It would take pages to tell of the many details of satisfaction this machine offers.

A 30 Days' Free Trial

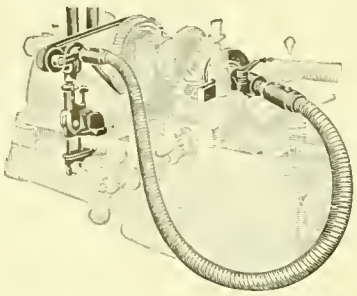
brings out all of these points. Just send us sample of your sash bar. We'll make up a set of special cutters and bed pieces to match. The machine will then be shipped you for thirty days' trial—no strings attached. All we ask is an opportunity to show you.

Heald Machine Co. Worcester, Mass.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

COATES Lathe Center Grinder



The simplest way to secure a perfect lathe center is to grind it.

The simplest way to grind it is with a

Coates Flexible Shaft Center Grinder

Fits any lathe—uses only the lathe power.

This is only one of the many useful portable tools we make for grinding, drilling, buffing, scratch-brushing, etc.

Get Bulletin W

Coates Clipper Mfg. Co.

Worcester, Mass.

HOWARD-WESSON-CO.

4 WALNUT STREET
WORCESTER

Successors to the

ART and HALF-TONE

Departments of

WOODBURY & CO.

ORIGINAL DESIGNS and Ideas for Advertising

HALF-TONE ENGRAVING Duotones 3 and 4 color plates

PHOTOGRAPHS of MACHINES, VIEWS and Manufactured products

UNSOLICITED TESTIMONIALS
From Leading Publishers, Printers, Advertising Men and Manufacturers Prove that the Designs and Engravings made by

HOWARD-WESSON-COMPANY

are original and attractive with right Printing Qualities and excellent selling values.

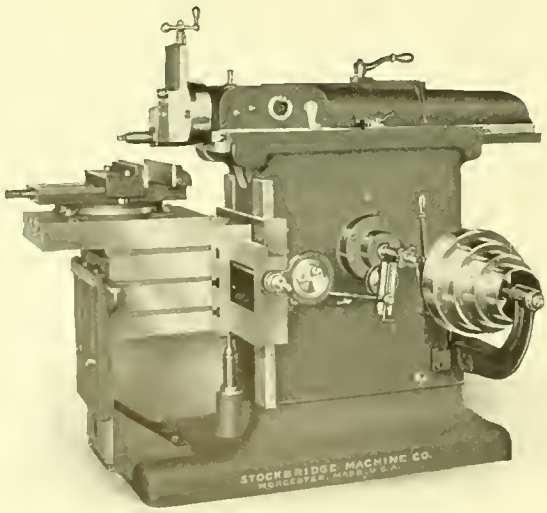
May we interest you in new designs and engravings?

MADE IN WORCESTER HOWARD WESSON CO.

Always at your service
Telephones
2670-2671

STOCKBRIDGE SHAPERS

MADE IN WORCESTER



24" STOCKBRIDGE SHAPER

Worcester made tools are recognized the world over as unexcelled in workmanship. Stockbridge Shapers combine good workmanship with SPECIAL FEATURES in construction, our patented Two-Piece Crank Motion producing economies in operation that no prospective purchaser of a shaper can afford to overlook.

STOCKBRIDGE MACHINE CO.

Worcester, Mass., U. S. A.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

Three Old Worcester Books

Volumes, Typical of the Work of Isaiah Thomas, the Greatest Printer of his Times, Possessing an Artistic Value Rarely Encountered To-day

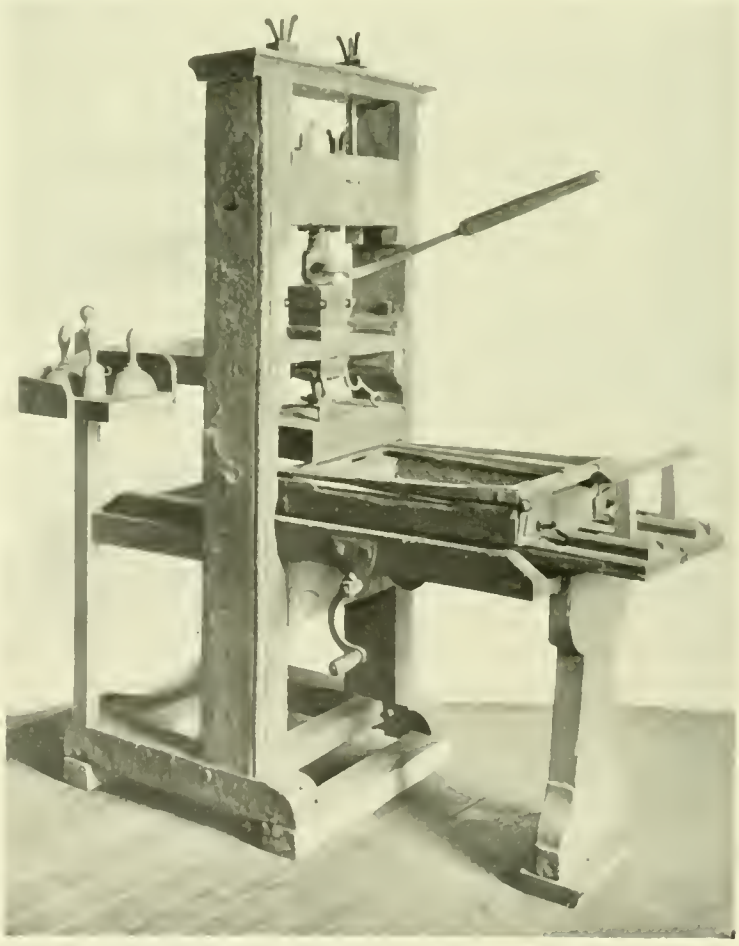
By Dr. Charles L. Nichols

THE Worcester of today is a city of multifarious activities. In many lines of endeavor its fame has literally extended to the ends of the earth: notably so in the liberal and mechanical arts. The spirit which has actuated its citizens from early times has crystallized into the slogan, "In Worcester, we aim at excellence."

One hundred and thirty-five years ago there came to Worcester a man who, through the medium of types and presses, made the name of his adopted city a synonym for excellence by the perfection of the books he published. Far in advance of his contemporaries, he etched his name deep in the scroll headed by Gutenberg and Fust—etched it so deeply that Harry Lyman Koopman, librarian of Brown University, writing in the Printing Art, described him as "the greatest American printer down to the advent of certain men now living, and, relatively to his times, unsurpassed even by them."

This man, Isaiah Thomas, is a notable figure in the early history of our country, and his influence is still an impelling force in the city which shelters his ashes and the country which he helped to found. From the hundreds of imprints from his presses, we have selected a few which are of interest to every bookman, and to every artist, and to every patriot, as depicting the man, his work and his times; all calculated to show that a century and a half ago, as today, the genius of Worcester was typified by its printing art and its unexpected excellence. The twentieth century has its DeVinnes and the eighteenth had its Thomas; the latter as well as the former made more than one splendid contribution to the art preservative of all arts.

Rameses II placed over the entrance of the Great Library Hall at Thebes the words, "A Place of Healing for the Soul."



The Blaew Press of 1680, Brought to Worcester by Isaiah Thomas in 1775, Now in the Possession of the American Antiquarian Society

From that time, and indeed earlier, there have been few writers of importance who have neglected to pay due homage to the value of books and to record their indebtedness to them.

It remained, however, for the century just gone to develop a new side of this interesting subject—the historical value of literature—and to show how much of interest and importance can be obtained by a careful study of books themselves in estimating the progress of the age in which they were produced. It is for this reason that we venture to bring before you three old Worcester books with the hope that sufficient interest clusters about them to entertain you for at least the passing hour.

In addition to being epoch making, these books are types of a large number of others which gather about them and at the same time illustrate the versatility and genius of the man from whose press they came.

The title of the first reads, "A Narrative of the Excursions and Ravages of the King's Troops under the Command of General Gage, on the Nineteenth of April, 1775. Together with the Depositions Taken by Order of Congress to Support the Truth of it. Published by Authority, Massachusetts Bay: Worcester, Printed by Isaiah Thomas by Order of the Provincial Congress."

This book, which contains an account of the battle of Lexington, twenty-four depositions duly witnessed and sworn to and a list of the killed and wounded, was issued by order of the Provincial Congress, then sitting at Watertown. There is no clue to the originator of this wise act, but in the Worcester Spy of May 24, 1775 (then called the Massachusetts Spy), appears an address to the people of Great Britain, signed by General Warren as President of the Provincial Congress, explaining the unwarranted assault upon the farmers of Massachusetts and calling for justice.

Early in the following July appeared this book, the object of which was to adduce definite evidence that the first blood was shed by the overt act of the British troops. Copies of it were sent to King George and his ministers, as proof that the battle was one of defence on our part, and to the governors of the different Colonies of America, to show the need of united action in the future for self-protection against the aggressions of the mother country. This was the first book printed in Worcester! The first book printed in any inland town in New England! Cambridge, Boston, New London, Newport, Providence, Portsmouth, Salem and Newburyport had presses, but no town away from the coast until 1775, and then that town Worcester!

I have always marvelled at those two patriots, who had sufficient self-control to walk away from the house of Rev. Jonas Clark on that eventful morning of April 19th, while they could hear the firing of the British on their brothers and did see with clearer sight than most of those left behind what was to be the issue of that battle. There were, however, many men actively engaged in the fight who were of interest and importance as well, and among them was the printer of this book, Isaiah Thomas. It may not be out of place to inquire how he came there and why his steps were turned toward Worcester.

Born in Boston in 1749, he was brought back after many travels and vicissitudes by his mother in 1755 and in the following year apprenticed to Zechariah Fowle, a printer of ballads and small books. He had been in school but six weeks of his seven years of life and had only learned his letters without attaining the ability to put them together into words. Placed on a stool in order that he might reach the cases, he was set at work with composing stick and type and thus had forced upon him the business to which he devoted his energies during a long and eventful life.

Samuel Draper in 1758 became a partner of Mr. Fowle and for three years was very kind and helpful to the boy. So well did young Thomas profit by these instructions that in 1761, when Draper dissolved the partnership, Thomas took charge of the office and principal part of the business.

His ability to adapt himself to the necessities of the times is well illustrated by the fact that, when the rival of Fowle, Thomas Fleet, obtained a negro who could illustrate his master's ballads with rude wood-cuts, Thomas at once turned his hand to the same work and made, during a few years following, over one hundred cuts for a similar purpose.

There are in the possession of the American Antiquarian Society of Worcester two books: one, "Tom Thumb's Play Book," on the fly-leaf of which Thomas wrote: "This book was printed by me when a 'prentice to A. Barclay, 1762;" the other is entitled "The Book of Knowledge by Ezra Pater," published by Z. Fowle in 1764, on the fly-leaf of which is written, "Printed and cuts executed wholly by I. Thomas when 13 years of age."

A boy so alert and quick-witted could not have lived in Boston in those stirring times without absorbing some of the independence of thought and speech with which those days abounded, and he was undoubtedly familiar with the meetings at the Green Dragon Tavern as well as those about the Liberty Tree.

In consequence of a disagreement with his master,

A

NARRATIVE,

OF THE

EXCURSION and RAVAGES

OF THE

KING'S TROOPS

Under the Command of General GAGE,

On the nineteenth of APRIL, 1775.

TOGETHER WITH THE

DEPOSITIONS

Taken by ORDER of CONGRESS,

To support the Truth of it.

Published by AUTHORITY.

MASSACHUSETTS-BAY:

WORCESTER, Printed by ISAIAH THOMAS, by order of the PROVINCIAL CONGRESS.

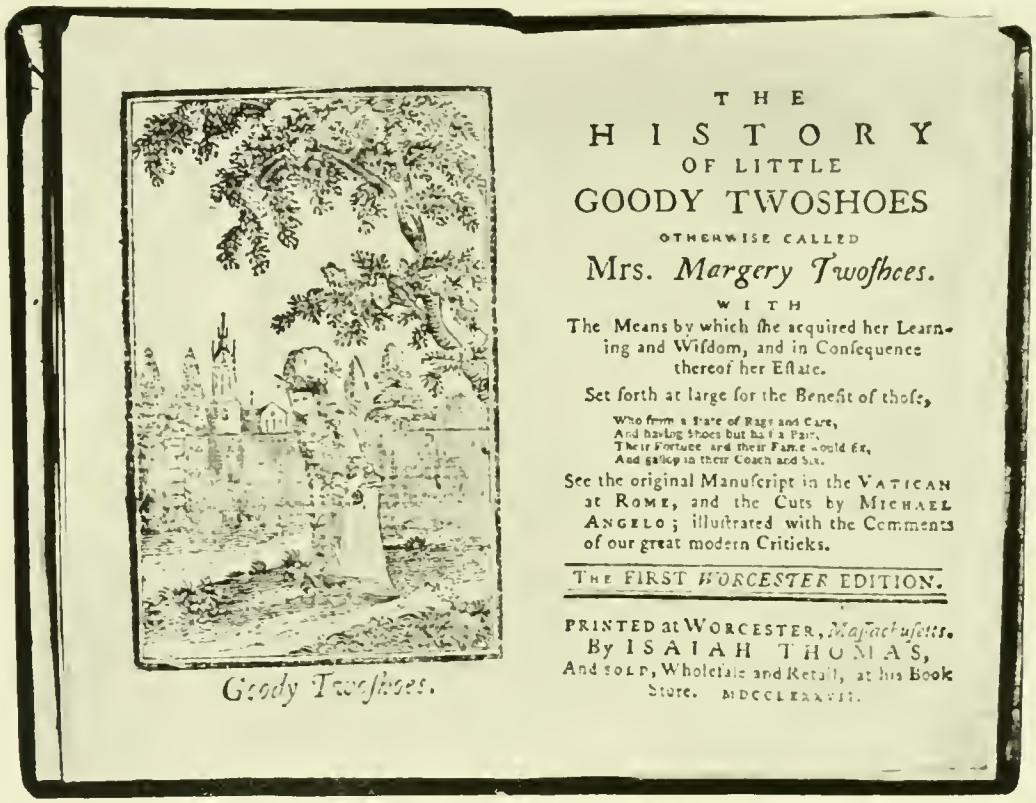
THE FIRST BOOK PRINTED IN WORCESTER

Thomas left Boston in 1766, intending to go to London. Upon reaching Halifax, he entered the employ of the Halifax Gazette, where, after a few weeks, his ability was recognized and he was placed in entire charge of the printing and publishing. The Stamp Act was then in force, and the boldness of the young man's editorial concerning it called down the wrath of the authorities, first upon the owners and next upon Thomas himself. Later he printed his paper with the stamp upside down, and then it was found that the stamp had been cut off the entire year's stock of paper, and a notice was printed in the Gazette that "all the stamped paper had been used, and as no more could be had, the paper would in future be published without stamps."

An issue of the Philadelphia Journal was published in full mourning. Broad lines surrounded the pages and at the bottom of the last was placed a coffin with the age of the newspaper and a statement that it died of a disorder called the Stamp Act. After his warning, Thomas did not dare go so far, but wrote in an editorial that being requested by a large number of readers, he printed a representation of that issue in his own paper. These details are given as a picture of the times as well as an illustration of how deeply the ideas of liberty and the intolerance of England's authority had become rooted in the mind of this Boston apprentice.

A few months of this life rendered it impossible for him to stay in Halifax and we next find him employed at Portsmouth. Here the audacity of his editorials in the Portsmouth paper compelled him once more to leave this field of work. For three years he lived a bohemian life, wandering from place to place, always seeking an opportunity to better his knowledge of printing and establish himself where his radical ideas would become a power.

In the spring of 1770 his good genius brought him back to Boston and he once more sought his old master, Zechariah Fowle. In July of that year, they, as partners, published the first copy of the Massachusetts Spy. After three months' trial of a paper published three times a week—an unheard-of venture at that date—Thomas bought out the interests of his partner Fowle. This purchase included the press and types on which he had worked as a child, and in 1771 he remodeled the paper into the larger "whole sheet royal size folio" weekly, which was continued until his removal to Worcester in 1775.



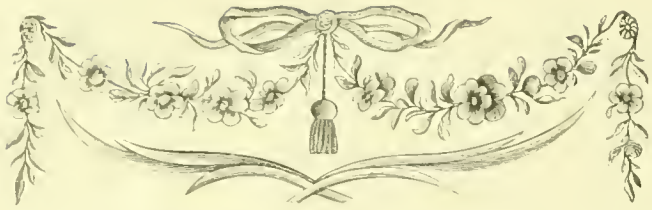
Goody Twoshoes.

THE
HISTORY
OF LITTLE
GOODY TWOSHOES
OTHERWISE CALLED
Mrs. *Margery Twoshoes.*
WITH
The Means by which she acquired her Learning and Wisdom, and in Consequence thereof her Estate.
Set forth at large for the Benefit of those,
Who from a State of Rags and Care,
And having Shoes but half a Pair,
Their Fortune and their Fame wou'd fix,
And skip in their Coach and Six.
See the original Manuscript in the VATICAN at ROME, and the Cuts by MICHAEL ANGELO; illustrated with the Comments of our great modern Criticks.
THE FIRST *WORCESTER* EDITION.
PRINTED at WORCESTER, *Massachusetts.*
By ISAIAH THOMAS,
And SOLD, Wholesale and Retail, at his Book Store. MDCCLXXVII.

A TYPICAL THOMAS CHAP-BOOK

This date, 1771, marks the real beginning of that career of Isaiah Thomas which led Brissot de Warville, in 1788, to write of Worcester: "This town is elegant and well peopled. The printer, Isaiah Thomas, has rendered it famous throughout the continent of America. He has printed a large part of the works which appear, and it is acknowledged that his editions are correct and well edited. Thomas is the Didot of the United States."

Almost from the beginning of its career, the Spy espoused without reserve the cause of the people and it soon became a power in the Colony. The attention of all parts of the country was drawn to the printer by



the bold attitude his paper took and the stirring articles which appeared in its columns. In North Carolina the Loyalists caused the Spy to be burned by the common hangman and the printer to be burned in effigy.

The Spy had many able contributors and its editor was brought into close contact with the best men of his party. A series of essays, signed Centinel, a writer whose identity was never divulged, and articles signed Mucius Scævola (Joseph Greenleaf, a justice of the peace in Plymouth County) gave the greatest offense to the government, and finally led to the prosecution of Thomas, in the course of which he was supported by many of the strongest friends of liberty.

While Isaiah Thomas' position was so marked and his reputation so widespread; while he was called by such a man as John Hancock "the supporter of the rights and liberties of mankind," it must be remembered that the cause which he espoused was that of rebels, and the party which he represented was not only in a minority, but for a long time was considered unworthy of notice. For that reason at the outset small and petty annoyances were employed to crush this nuisance.

The mortgage on his press and types foreclosed; efforts were made to take away his advertising and printing business; he was secretly warned, finally publicly admonished, and at last the attempt was made to bring him before the Council. His troubles in Halifax stood him in good stead now, and with this experience and the advice of the Committee of Safety he failed to fall into the trap set for him.

In the early part of 1775 the conditions became so serious that Thomas sent his family to Watertown, and went himself to Concord to consult with John Hancock and Samuel Adams regarding his future course. By their advice, on the night of April 16th, his press and types were removed from Boston by the aid of Timothy Bigelow and Dr. Joseph Warren, and forwarded to Worcester, where he had been urged to come during the previous year.

Thus he was turned adrift once more with his paper and its 3500 subscribers reduced to nothing, most of his property lost, and bills due him amounting to over $3000 practically valueless. All this was brought about by his steadfast adherence to principles which had been burned into him by his boyhood's observations and his later experience in Halifax and Boston.

E. Smith Thomas in his interesting memoirs writes: "A boy of fourteen, I was presented to Washington during his visit to Worcester by my distinguished kinsman, Isaiah Thomas. I can never forget his words or my feelings on that occasion. 'Young man,' he said, 'your uncle has set you a bright example of patriotism and never forget that, next to our God, we owe our highest duty to our country.'"

We have seen in part how Thomas earned this high tribute, and can now readily understand how he was one of the men who stood on the green at Lexington that April morning.

A CURIOUS

HIEROGLYPHICK BIBLE;

OR,

SELECT PASSAGES

IN THE

OLD AND NEW TESTAMENTS,

REPRESENTED WITH

EMBLEMATICAL FIGURES,

FOR THE

AMUSEMENT OF YOUTH:

DESIGNED CHIEFLY

To familiarize tender Age, in a pleasing and diverting Manner, with early Ideas of the Holy Scriptures.

TO WHICH ARE SUBJOINED,

A short Account of the LIVES of the EVANGELISTS, and other Pieces.

Illustrated with nearly Five Hundred Cuts.

THE FIRST *WORCESTER* EDITION.

PRINTED at *WORCESTER*, MASSACHUSETTS,
BY ISAIAH THOMAS,
And SOLD, Wholesale and Retail, at his BOOKSTORE.
MDCCLXXXVIII.

The next day he started for his future home in Worcester, and the following extract will show how quickly he took up the lines which were to lay the foundation of that business which employed one hundred and fifty men in its most prosperous days. The Journal of the Committee of Safety, with date of April 29, 1775, reads: "Letters from Col. Hancock, now at Worcester, were read, whereupon voted that four reams of paper be immediately ordered to Worcester for the use of Mr. Thomas, printer, he to be accountable." This was the first supply of paper for the Massachusetts Spy in Worcester, and for the printing of the book noted in this article as the first book printed in Worcester.

While this book in no wise compares, as an example of typography or pure English, with Thomas' later publications, its opening sentence even cannot fail to make us gratified that the first book printed in our city was freighted with such an important duty as to prove the justice of a cause which until that date had been looked upon as the actions of rebels—not the cause of liberty!

The title page of the second book reads: "The History of Little Goody Twoshoes, otherwise called Mrs. Margery Twoshoes." Its dedication is: "To all young Gentlemen and Ladies who are good or intend to be good, this American Edition is inscribed by their old friend in Worcester." "This book was printed by Isaiah Thomas for the amusement and instruction of children, which will make them wise and happy," as he quaintly writes in his advertisement.

The Juveniles, of which this is a type, over sixty of which were printed by Thomas and his son, mark an

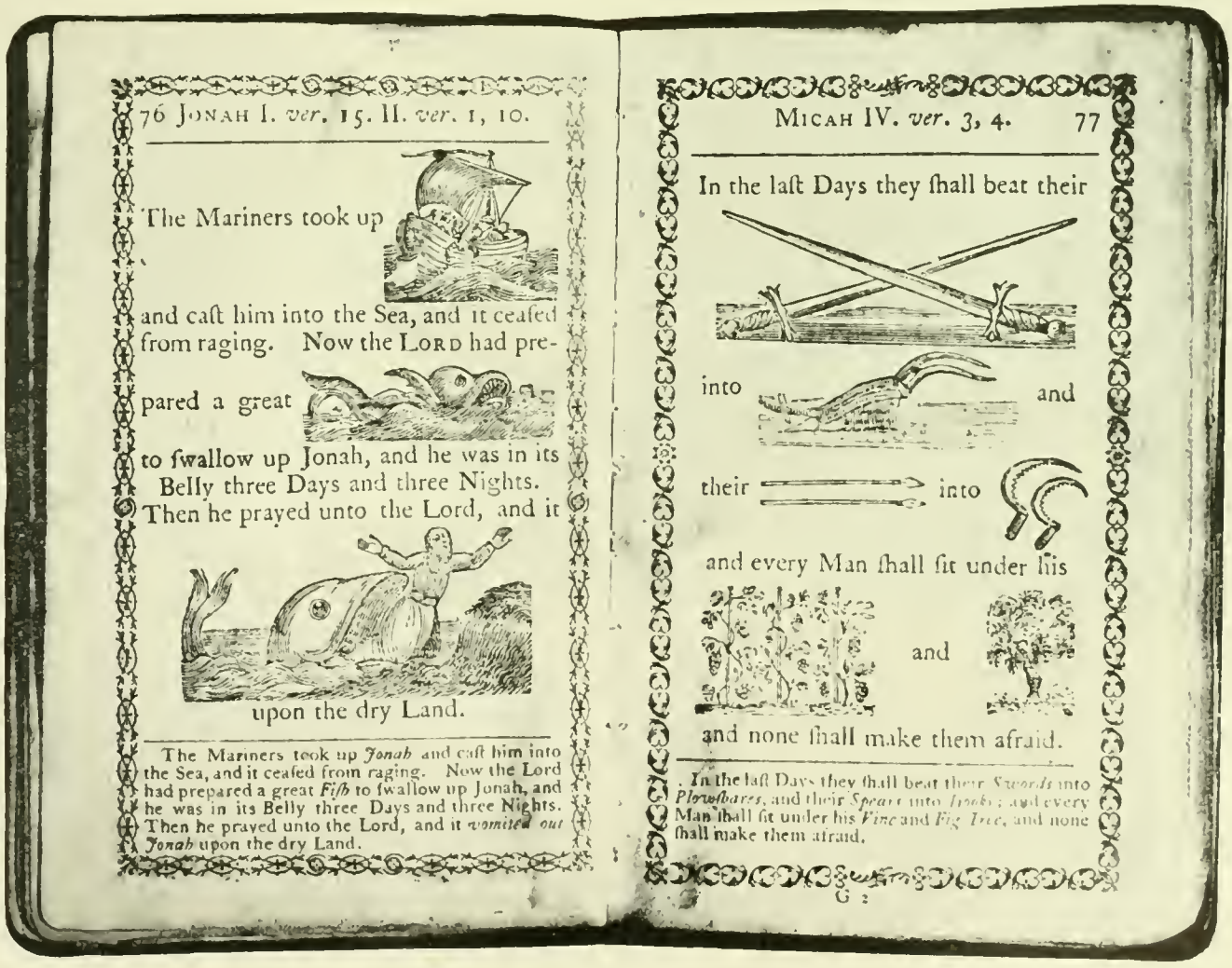
epoch in the literature of children in the 18th century. During the 17th century and the beginning of the 18th, the only school books for children consisted of Horn books, Battledores and Primers. In addition to these there gradually grew up a class of books to attract the youth. These were hawked about by the peddlers, called Chap-men, who went from place to place, from which the books obtained the name Chap-books.

Previous to these had been published a large number of religious books, of which "War with the Devil" and "Youth's Divine Pastime" are fair samples. Fox's "Book of Martyrs" and Bunyan's "Pilgrim's Progress" must have been exciting reading compared with that book by James Janeway entitled "A Token for Children, being an Exact Account of the Conversion, Holy and Exemplary Lives and Joyful Deaths of Several Young Children," which was the most popular book in New England in 1750. To this was added by Cotton Mather a long appendix, "Preserved and Published for the Encouragement of Piety in other Children."

We know more about Goody Twoshoes than the rest, thanks to Charles Welch, who, in his writings on the subject, shows with great appearance of probability that this book was written by Oliver Goldsmith. It was certainly written by a master hand, and the Thomas edition remains practically unchanged except where it was necessary to alter it for American readers.

John Newbery, the old bookseller of St. Paul's Churchyard, was the first man in the last century to introduce a regular system for a juvenile library. From 1740 till his death in 1787, he published a series of juveniles which gave to the children a most charming collection of stories, beautifully written, and exquisitely adapted to their understanding and needs. These books made a revolution in the children's world and we find them everywhere supplanting the older style.

Charles Lamb wrote in 1802 to his friend Coleridge: "Goody Twoshoes is almost out of print. Mrs. Barbauld's stuff has banished all the old classics of the nursery and the shopman at Newbery's hardly deigned to reach them off an old exploded corner of a shelf when Mary asked for them. Mrs. Barbould's and Mrs. Trimmer's stuff lay in piles about." This expostulation at the neglect of the Newbery books was written be-



PAGES FROM THE HIEROGLYPHICK BIBLE

[Courtesy of the PRINTING ART.]

ONE OF THE FIFTY COPPER PLATE ILLUSTRATIONS IN THE FOLIO BIBLE

cause of a reaction once more to the moral tale and religious tract.

For many years, however, these truly beautiful tales held their sway over the minds of children, and were the despair of writers who attempted to imitate them. We find them imported to America as early as 1767 at least.

As soon as peace was declared, Thomas began to import books, and in the Spy, November 13, 1783, he printed: "Just arrived from London and to be sold—a long list of books, among them Primers and a variety of small Gilt Books for children with cuts."

Two years later, when the rush of prosperity had ceased, the editor of the Spy warned the people that there had been an excessive amount of importing, and in the issue of July 28, 1786, he wrote: "The present scarcity of money will in all probability be the only means to bring us to ourselves. We have made large importations from Great Britain and elsewhere, and have little besides cash to make payment. All the circulating currency in United America is now thought insufficient to pay what we owe for foreign luxuries."

What happy inspiration suggested to Isaiah Thomas he should reprint those wonderful Newbery books will never be known! It seems a fair inference that his own sound judgment, as seen in the editorial just quoted, and his shrewd business sense, were responsible for this plan to avoid further imports. On the 27th of June, 1786, the following advertisement appeared in the Worcester Magazine: "A large assortment of all the various sizes of children's books, known by the name of Newbery's Little Books for Children, are now republishing by I. Thomas in Worcester, Massachusetts. They are done exactly in the English method, and it is supposed the paper, printing, cuts and binding are every way equal to those imported from England. As the subscriber has been at great expense to carry on this particular branch of printing extensively, he hopes to meet encouragement from the booksellers in the United States."

On the title page of "The Brother's Gift, or the Naughty Girl Reformed" (1795), is written:

> "Ye Misses, shun the coxcomb of the Mall,
> The Masquerade, the Rout, the midnight Ball;
> In lieu of these, more useful arts pursue,
> And as you're fair, be wise and virtuous, too."

The third edition of Mother Goose's Melody appeared in 1799. Of this—said to be the rarest of the Thomas books—only one perfect copy, now in possession of the writer, is known to exist.

John Newbery was a wonderful advertiser, both of his books and his medicines, and we find in the text frequent references to books soon to be published, which good little boys and girls are expected to buy. Isaiah Thomas needed no such example, or at least

made a good second. In one book we find a little boy asking his father to save his pennies for him, so that on the next pleasant day he may go to Worcester and buy one of Mr. Thomas' Gilt Books. In the Picture Exhibition (p. 48) the Youth says: "I have long since laid aside those books which tended to inspire false notions, and by the direction of my parents have supplied their places by the Fairing and other valuable little books sold by Isaiah Thomas, Bookseller in Worcester."

The most curious thing among these juveniles is the Hieroglyphick Bible, published in 1788. This book was illustrated with five hundred cuts, arranged with the print after the manner of an illustrated rebus. Wright in his "Early Bibles of America" calls particular attention to it as a curious attempt to interest children in sacred subjects. It may serve as a natural step to the third of these old Worcester books, the Folio Bible of 1791, the first folio edition of the Bible in America.

The question as to who printed the first Bible in America is difficult to solve. William Bradford, in 1688, endeavored to print a Bible under the auspices of the Society of Friends. Cotton Mather, from 1710 to 1728, tried to find printers for his Bible, the manuscript of which is today in the library of the Massachusetts Historical Society. In 1770, John Fleming, a Scotch printer of Boston, issued a prospectus, but failed to secure the needed number of subscriptions (300). In 1781 Robert Aitken of Philadelphia printed the New Testament in English and in 1782 issued the whole Bible, and to this small duodecimo book the honor was long accorded.

In his "History of Printing" Thomas, however, states that Rogers & Fowle, during their partnership (1742 to 1750) printed an edition of 2000 copies of the New Testament for Daniel Henchman and other booksellers of Boston. His informant was his master, Zechariah Fowle, who asserted that he was a journeyman at the time and worked at the press. Again Thomas states that in 1752 Kneeland & Green printed, principally for Daniel Henchman, an edition of 800 copies of the Bible in small quarto. It was carried through the press privately and given an imprint: "London: Printed by Mark Baskett, Printer to the King's most excellent Majesty." This was done in order to avoid persecution from those in England who published the Bible by a patent from the Crown. He says: "When an apprentice I often heard those who assisted at the case and press mention the fact. The late Governor Hancock was related to Henchman, knew of the transaction and possessed a copy of this impression." A copy of this 1752 imprint recently came to light in the possession of the late George C. Thomas of Philadelphia.

Without question, Thomas was many years preparing for this task and gave it much thought. In the introduction, he writes: "The Editor furnished himself with nearly 30 copies of the Bible, printed at different times and places, and from these he selected the most correct, by which to revise the whole of this work. Every sheet of the Text, before its commitment to the press, was carefully examined by the clergymen of Worcester and by other capable persons and compared by no less than eight different copies; six of them the most correct British modern editions from the presses of the Universities of Oxford and Cambridge, and two of them ancient British copies of the present translation—one printed in London, 1626, by Benham Norton and John Bill, only sixteen years after the first publication of this translation; the other at the University Press at Cambridge in 1637. The Editor had also among his collection of Bibles, the celebrated Bishop Cranmer's, by supposition the first complete translation of the Bible into English, 1540."

In November, 1789, he printed a prospectus for the octavo, with the conditions of printing, price and a sample page. The price was $7.00, or to those unable to pay in cash by December 20, 1790, 21 shillings in wheat, rye, Indian corn, butter or pork, delivered in Worcester, and 21 shillings cash on delivery of the book. In the Massachusetts Spy of December 15, 1791, appears this advertisement: "The Royal Quarto Bible is this day completed from the press of the undersigned." In this issue also appeared: "Folio Bible: The first volume of this large work is this day completed and will be put in boards with all speed. The second volume is in great forwardness; both the letter press and plates are nearly completed."

The type was new and made especially for this book, the paper fine and the fifty copper plate illustrations, with which both Bibles are adorned, possess considerable merit.

Amos Doolittle, the most noted engraver of that day, made one plate, "Paul Shaking the Viper from his Hand," and it is considered the finest of the set.

S. Hill and H. Norman contributed a few plates, but thirty-two of the number were made by Joseph Seymour, who resided in Philadelphia and was engaged in landscape painting as well as engraving. Seymour and Hill seem to have spent some time in Worcester, for a number of books printed at about this time have copper plates signed by them. In the introduction to Charlotte Smith's Sonnets, Thomas refers to their residence in Worcester.

The Folio Bible was bound in two volumes or in one thick volume, as seen in the fine specimen presented to the American Antiquarian Society by Mr. Thomas. These Bibles were bound by him, and the one last referred to is sumptuously done, reflecting great credit on Thomas as a binder as well as a printer.

Thus we have followed the progress of this printer from his first coming to our city until the time when he resigned his active work to his son. A careful perusal of this, his greatest work, will justify the words of Benjamin Franklin, who, in referring to the Folio Bible, called Isaiah Thomas "The Baskerville of America."

The Moderate Cost House

The Value to a City of the Cultivation of a Home-loving Spirit and the Possibility of Housing the Individual Family. The Albany Committee and its Investigations

EVERY American industrial city has its housing problem, and Worcester is not exempt. A community which is constantly engaged in the task of Americanizing working people from over two score alien races has always with it the potential evil of the tenement-house problem. Not in a year, or two, can we change the gregarious habits of many races, but such habits, if not sharply fought, soon produce conditions which goad us to action.

From the experiences of many cities we are able to deduce certain facts, trite perhaps, but invariably true. Civic apathy — contentment with things as they are — and civic self-righteousness — the belief that everything in the city is of the best — assist the car of civic progress much as the autumn leaves assist the car which bears us to our homes.

Civic progress is not measured solely by the prosperity — or, more correctly, by the appearance of prosperity — of the manufacturers and merchants of a community. Somewhere, deep down in the body of citizens whose manual labor has been the real source of prosperity, there may be a malignant sore, distilling day by day a toxic poison that will in time produce a condition of civic anaemia which will yield only to heroic measures. That such disturbing poison spots are usually obscure in their primary stage is only a stronger reason for eternal watchfulness.

We have said that Worcester is pre-eminently an industrial city. Its prominence in the field of mechanical production has been gained and maintained by the skill of its artisans. With this undeniable fact ever before us, it behooves us to guard with jealous care against anything which will tend to lower the grade of our factory employees. That which tends to lower the vitality or debase the ideals of this great class, spells retrogression from that high standard of mechanical excellence which is at once the pride of our municipality and the source of our material success.

Increase of population means increase of tenement dwellers in manufacturing centres. By tenements in this connection, we mean houses containing three or more families. To dwellers in such houses, "home" has lost its meaning in the best sense of the word. Their attachment to the city of their choice is usually no stronger than that of a tropical parasitical plant, and the least wind of adversity tears them loose, to whirl them away to find an insecure hold in some other locality and begin anew the battle for existence. In comparison the real home is like some sturdy tree that has sent its tap-root down to the never-failing waters and suffers the tempest and the drought, only to spring into renewed life at the first favorable opportunity.

In the introduction to "The Art of Building a Home" by Barry Parker and Raymond Unwin occurs this statement: "It is too often evident that people, instead of being assisted and their lives added to by the homes they occupy, are but living as well as may be in spite of them."

This thought leads to a consideration of the effect of living under bad conditions. Modern writers have attempted to show — and their conclusions are now almost universally accepted — that a man's surroundings have far more effect upon the development of his character and mentality than the traits that may be his heritage. Environment leaves a permanent record. Conditions created by a lack of broadening and uplifting home influences are a constant menace to the social fabric. Poverty itself is only too often directly traceable to an unhealthy home life. Who can doubt that the immorality, the vice and crime of the boy and girl offenders who appear in the juvenile sessions of our courts

Group of Houses Erected by the Ludlow Manufacturing Associates at Ludlow, Mass. Cost, about $2,100

FRONT ELEVATION OF HOUSE ERECTED BY ROCKTON REALTY COMPANY AT AMSTERDAM, N. Y. COST, $1800

are in a large measure the direct outcome of bad housing conditions?

Overcrowded and unsanitary tenements interest the entire community. Those who are themselves exempt from the evils produced by such dwellings are taxed in many ways to help sustain the burden such housing imposes upon the municipality. The child who grows up in such an environment is almost sure to have a physique below the normal, to have a weakened power to resist disease, and to have a diminished earning capacity. And so, through hospitals and penal institutions, through private and public charitable associations, through the various forms of state and municipal relief, the more fortunate of the citizens are forced to carry the burden imposed upon them by their own disregard of well-known economic laws.

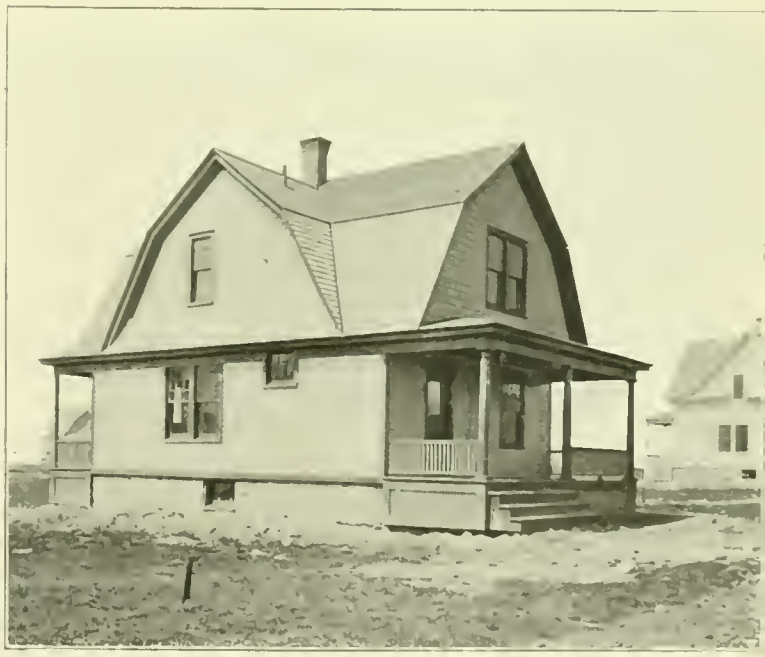
Right here the writer can hear you saying: "You are speaking of slums, and Worcester has only two or three small districts which could be so classed." True it is that these ulcers upon the corporate body are as yet small in extent, but these open sores are a sure indication of the blood taint that is weakening the tissues that surround them. The microbe of home-dissolution has found lodging within the civic body. Let every component cell fortify itself!

Worcester has been called "a city of three-deckers." The stranger within our gates rarely fails to express amazement at the hundreds of buildings of this type which house so large a portion of our workingmen. In these we find a most insidious form of attack upon the true home life and spirit.

Many will say that at the present cost of erection in Worcester this form of structure is the most favorable to furnish adequate return to the landlord at rentals within the means of the working class. What they really means is that this type produces the greatest income for the landlord. Even this statement is only partially true. Watch the method pursued by those most active in erecting "three-deckers." Note how they skim off the cream of the first two or three years and then get out from under to let some less sophisticated investor bear the burden which is imposed upon the owner by the constant lowering of the grade of tenants. Real estate operators of long experience in Worcester have repeatedly told the writer that almost without exception each succeeding tenant is of a lower grade than the one preceding. The effect upon the net income of such property needs no forecasting.

Craftsmen of the intelligence and skill demanded in Worcester industrial plants are ever striving for all that life contains of genuine happiness. Do you imagine that the man of this type wants to have his children grow up in houses where there are rooms into which the sun never shines; where the privacy of the individual home is necessarily missing; where the opportunity for domestic life is curtailed by the close contact with other families whose standard of morality and decency may be much lower; where yard-room is almost a nonentity and his children are forced to play upon the streets except for the few summer months when our splendid new playgrounds afford a partial relief? If you have any doubt of the true situation in Worcester, let it be known that you are to erect a few cottages of modern design to rent for $18 per month and note the number and the character of the applicants for them

That you may know that it is possible to build cottages which at this rental will produce a fair income, we incorporate in this article a copyrighted report of a special committee of the Albany (New York) Chamber of Commerce, appointed to investigate the question of moderate cost houses.



FRONT ELEVATION OF HOUSE ERECTED BY ROCKTON REALTY COMPANY AT AMSTERDAM, N. Y. COST, $1,800

To the Board of Trustees, Albany Chamber of Commerce.

Gentlemen:

Your committee appointed to investigate the question of moderate cost houses respectfully submit the following report:

Your instructions were to investigate the possibility of building houses under present conditions of cost of labor and materials that would bring a fair net return on the investment at a monthly rental of not to exceed $18. Fully realizing that the cost of all the essential elements of construction has materially increased in the past decade, we determined to confine our investigation to houses that have actually been built during the last two or three years. Furthermore, we have endeavored to select locations where conditions of cost should be as nearly as possible similar to local conditions. The possibility of the scheme is being proved constantly in such cities as Baltimore, Cleveland, Detroit, and many others where rapid industrial development is making absolutely necessary the erection of thousands of houses for workingmen, but the expense of securing information from such remote centres, and the fact that the very different conditions which govern the cost of construction would make such information less valuable for our purpose, have led us, instead, to present the following examples of what has actually been accomplished in localities comparatively near to Albany.

We have visited several towns and have personally inspected many of the houses described in this report, most of which have been built within the past year. We have every reason to believe the cost of construction as given us by the owners or builders are accurate and reliable, and we are convinced that it is possible to erect houses containing modern conveniences that can be rented at prices which the average man can afford to pay.

Believing that the greatest need in Albany is for detached houses, each for a single family, we have given most of our attention to this type, though some examples of two-family designs are presented which in cost and arrangement seem to us to entitle them to consideration.

For convenience, the report has been subdivided into chapters:

1. One-family Houses;
2. Two-family Houses.

One-family Houses.

All of the figures given are exclusive of the cost of the land.

At Amsterdam, N. Y., the committee found some exceptionally attractive as well as convenient houses that have lately been built by the Rockton Realty Company. They are two-story frame houses with stone cellar, and built in a substantial manner. Outside dimensions 23 ft. x 28 ft., with piazza extending across the entire front and a covered porch in the rear. Height of ceilings, first story 8 ft. 6 in., second story 8 ft. House piped for gas and wired for electricity. First floor contains hallway, living-room (12 ft. x 14 ft.), dining-room (11 ft. x 12 ft. 6 in.), kitchen (10 ft. x 10 ft. 6 in.) which has a stationary boiler, running water, granite sink and

Rear Elevation of House Erected by Rockton Realty Company at Amsterdam, N. Y. Cost, $1800

a kitchen cabinet. Second floor contains three bed-rooms — 12 ft. x 8 ft. 6 in., 10 ft. x 12 ft. and 9 ft. 6 in. x 10 ft. 8 in., also a convenient bath which contains modern open plumbing, porcelain-lined tub and nickel-plated fixtures. The interior finish is No. 1 kiln-dried cypress; the floors on both first and second floor No. 2 N. C. pine, except in the bathroom, which is maple.

These houses in a group of ten were erected in 1909 at a cost of $1,800 each. For the sake of contrast two styles of exterior construction were adopted, the cost being the same.

The pictures of the exterior of each style are shown herewith. The plans and full working specifications have been submitted to the Bureau of Buildings of the city of Albany, have been approved, and may be found in the rooms of the Chamber of Commerce.

We have given these houses special attention because they seem to us to combine attractiveness in appearance, with the greatest number of conveniences and an admirable arrangement of the rooms, and further because they have been built in a nearby town within the past year. Furthermore, we have secured from the builders of these houses a statement that they stand ready to build in Albany ten houses on the same plans and specifications for the same price, that is, $1,800 each, thus effectually disproving the statement which has frequently been made, that conditions of the building trades and the cost of material in Albany make it impossible to accomplish the same results as economically as elsewhere.

At Schenectady the three attractive houses shown in accompanying illustrations were erected by Peckham, Wolfe & Co. during the past winter at a cost of $1,800 each. These houses are similar in construction and material and finish to those in Amsterdam. They contain the same number of rooms on each floor; contain a bath with open plumbing and have in addition a large attic with convenient stairway.

The committee also inspected a number of houses built

Group of Houses Erected by Peckham, Wolfe & Company at Schenectady, N. Y., at a Cost of About $1,800 Each

at Ludlow, Mass., by the Ludlow Manufacturing Associates for their employees.

One group of houses, known as the Weston Cottage No. 1, contains six rooms and a bath, each house having a frontage of 21 ft. and a depth of 27 ft. The houses are finished practically the same as those at Amsterdam. They cost approximately $1,800 to build.

Another style costing about $300 more is reproduced by an attractive illustration.

The firm of Witherbee, Sherman & Co. has made a very comprehensive test of the building of concrete houses, both in concrete blocks and with stucco finish at its industrial village, Mineville — five miles from Port Henry. About fifty houses have so far been erected at very low costs under conditions which are said by the officers of the company to be no more favorable than in Albany, except in the cost of the refuse iron ore tailings of which the concrete blocks are made. This material in the proportion of one part cement to five parts tailings may be moulded into a strong and attractive block, and could be used in Albany at a comparatively low cost. In the interior one-inch furred strips are nailed to the inside of the block, and upon these wooden laths are nailed. Pulp plaster is employed, the floors are single, either of birch or maple, and the roofs are of second quality Green Granville slate. On account of the locality there is no plumbing or water supply.

One group of these houses containing six rooms are 21 ft. 10 in. x 30 ft. 4 in. The first floor contains three rooms, 8 ft. 1 in. x 12 ft. 4 in., 15 ft. 8 in. x 12 ft. 5 in. and 11 ft. 5 in. x 8 ft. 7 in. The second floor contains three rooms, 11 ft. 5 in. x 8 ft. 7 in., 8 ft. 1 in. x 12 ft. 4 in. and 12 ft. 4 in. x 15 ft. 8 in. These houses cost $1,000 to build. The addition of plumbing and water supply would probably increase the cost not to exceed $300.

Another group of houses, the elevation of which is shown, cost the same firm $1,025 each to construct. This type is about 30 ft. x 26 ft. First floor has living-room (12 ft. 8 in. x 10 ft.), dining-room (14 ft. x 14 ft.), kitchen about 9 ft. 5 in. square, pantry (9 ft. 6 in. x 4 ft.).

Second floor has three rooms, 10 ft. 9 in. x 14 ft. 2 in., 14 ft. x 9 ft. 6 in. and 12 ft. 6 in. x 10 ft.

A seven-room house has also been erected at a cost of $1,100.

Two-family Houses.

The Ludlow Manufacturing Associates at Ludlow, Mass., have erected several types of two-family houses, two of which are described below.

The type called the Plymouth Cottage is an eight-room twin house with piazzas and entrances on the side. The entire house has a frontage of 30 ft. 6 in. and a depth of 28 ft. Each of the two tenants has on the first floor a living-room (10 ft. 11 in. x 15 ft. 3 in.), kitchen (13 ft. 8 in. x 11 ft. 3 in.) and two large closets with small hall, and on the second floor two bed-rooms (10 ft. 11 in. x 15 ft. 8 in.— 11 ft. 8 in. x 11 ft. 3 in.) and a bath. These houses were erected at a cost of $2,600 each.

The company has also erected a twelve-room twin house which they have named the Longmeadow Cottage. This house has a frontage of 33 ft. 6 in. and a depth of 38 ft. 9 in. A piazza extends partially across its front, from which each apartment is entered. Each of the two tenants has on the first floor a parlor (11 ft. x 13 ft. 3 in.), living-room or dining-room (11 ft. x 16 ft. 9 in.), kitchen (10 ft. 9 in. x 16 ft. 9 in.) and hall; stairs winding up from centre or living-room. The second floor contains three bed-rooms (10 ft. x 16 ft. 9 in. — 10 ft. x 13 ft. 3 in.— 10 ft. 9 in. x 10 ft. 9 in.) and a bath, with ample closets from each bed-room. These houses were erected at a cost of $3,400 each.

The firm of Witherbee, Sherman & Co. has also built at Mineville some attractive twin houses of concrete blocks. These houses have a total frontage of 52 ft. 4 in.

Concrete-Block House Erected by Witherbee, Sherman & Company at Mineville, N. Y. Cost $1,025

and a depth of 29 ft. 4 in. They contain fourteen rooms, allowing for each tenant three rooms on the first floor and four on the second. Those on the first floor are 10 ft. x 12 ft. 6 in.—13 ft. x 14 ft. 11 ft. x 13 ft. 2 in., and on the second floor 8 ft. 3 in. x 12 ft. 3 in.—11 ft. 9 in. x 12 ft. 11 in.—9 ft. 3 in. x 15 ft. 5 in.—9 ft. 5 in. x 10 ft. 4 in. These houses cost the company $2,650 each, this price not including any plumbing. For elevation see the illustration, in this article, of the double house. The houses built by Witherbee, Sherman & Co. at Mineville are described at length in an illustrated article in the "Cement Age" of September, 1909.

At Barre, Mass., some convenient two-family twin houses were built during 1908 and 1909, and more are in the course of erection by the Barre Wool Combing Co. The foundations are concrete, the houses are frame, shingled. The interior is finished in cypress and the floors are rift hard pine throughout. These houses contain twelve rooms, allowing for each of the two tenants three rooms on the first floor, size being 11 ft. 3 in. x 10 ft. 6 in., 17 ft. 3 in. x 11 ft. 3 in. and 11 ft. 3 in. x 11 ft. 6 in., also a good sized pantry. On the second floor three rooms, 13 ft. 6 in. x 11 ft., 10 ft. x 11 ft. and 11 ft. x 11 ft. 6 in., the latter room being generally used as a bath. The cost of each twin structure, including plumbing and range, was $2,067.43.

At Schenectady the committee found an exceedingly convenient two-family house designed by C. G. Van Rensselaer of Schenectady. This house is 24 ft. 6 in. x 48 ft. The first apartment contains parlor, dining-room, kitchen, three bed-rooms and a bath, together with hallway and several good-sized closets. Second floor contains an additional room which may be used as a small reception room. A large porch is built on the rear with stairways. Cellar arrangements for heaters, coal-bins and other conveniences. The house has slate roof, birch veneer doors and hard pine trim all through. Finished floors of Georgia pine. Plumbing is white enamel iron, with nickel-plated pipes where exposed. Hot-air heating. This house has recently been completed at a cost of $3,400.

Twin House Built of Concrete by Witherbee, Sherman & Company at Mineville, N. Y. Cost $2,650, Exclusive of Plumbing or Heat

Sites.

The committee has also investigated the question of available locations. Sites have been found in various parts of the city, some within a short walking distance of large manufactories and others within a few blocks of trolley-lines. Both improved and unimproved properties have been located, but all of the sites selected are level, thus requiring practically no expenditure either for fill or excavation. The varying dimensions of the sites selected, the difference in cost per square foot on account of location, and the fact that some properties are on improved streets, others partially improved and still others without any improvements whatever, make it impracticable to furnish the necessary data in this brief report to permit of intelligent consideration on the part of a prospective purchaser. Furthermore, it is believed that some of the sites, at least, may be obtained at a figure somewhat lower than that asked for them if a bona-fide offer were to be made.

The full data that the committee has gathered in reference to sites are on file at the Chamber of Commerce for the inspection of interested parties. Furthermore, the working plans of all the houses referred to are likewise on file and in some instances complete specifications have been secured. Access to all of the above material may be had upon application to the Secretary.

The results of our investigations have convinced us that it is possible to build desirable houses in Albany to rent at not to exceed $18 per month, and in reaching that conclusion we have based our calculation on the gross yearly return of 10 per cent. on the investment. We furthermore believe that Albany capitalists and manufacturers who realize the need of such development in this city will be willing to employ their funds in the building of houses on this basis.

Resptfy. submitted,

Edmund N. Huyck,
DeLancy M. Ellis,
William B. Jones,
Committee.

Worcester's future progress demands that we employ the most skillful and intelligent of American mechanics; that we do naught to undermine the capacity of our workingmen; that we maintain and improve the excellence of our product; in short, that we make Worcester a city of homes that we may attract to our community the best of the country's artisans, and make the Heart of the Commonwealth as noted for its citizenship as for its products.

Lawrence Veiller well says in "Housing Reform:" "Democracy was not predicated upon a country made up of tenement dwellers, nor can it so survive."

Million for City Improvements

The Reading (Pa.) Board of Trade is conducting a campaign in the interest of a municipal loan of $1,250,000 for street paving, sewers, new City Hall, parks and playgrounds.

The Day of Opportunity for American Manufacturers

The Hon. James E. Dunning, United States Consul at Havre, France, Addresses the Worcester Board of Trade on the Extension of Our Foreign Commerce

IT was eminently fitting that a son of the Pine Tree State was selected by Secretary Knox to bear the message of the Department of State concerning foreign trade to the manufacturers of New England. It is gratifying, too, that this Board was among the earliest to be selected as one of the important and influential commercial organizations that were worthy of special effort in the present educational campaign for the purpose of promoting our foreign commerce.

It was an inspiring address to which the members of this Board listened on the last evening of September. Not with flowery oratory or meaningless phrases, but with forceful language and skillful marshaling of facts and figures, did the Hon. James E. Dunning, United States Consul at Havre, France, considered one of the world's foremost experts on foreign trade, drive home the lesson of the vital need of the awakening of American manufacturers to the great necessity for the expansion of our export trade and to the great reward which will accrue from such expansion.

The occasions are rare when the columns of this Magazine are opened to any comparison of the work of this Board with the work of similar bodies, but when an authority like Mr. Dunning prefaces his formal remarks with the statement that, in Europe, the Worcester Board of Trade is better known than any other American commercial organization, and that this result has been largely achieved through the widespread circulation of the Worcester Magazine, it should be a source of pride to the members of this Board and a spur to greater effort to make "Worcester a synonym for worth," as the speaker happily phrased it.

Space forbids the publication of Mr. Dunning's speech in full, but certain passages so well illuminate the general problem of the exporter that, for the benefit of our members who were unable to be present, and for the benefit of other commercial bodies that have not had the pleasure of hearing Mr. Dunning, we print portions of his address:

"In the first seven months of 1902, we exported wheat to the value of $60,000,000, and imported pure luxuries to an almost equal amount. In the similar period, seven months, of 1910, on the contrary, we exported only $10,000,000 worth of wheat, but imported pure luxuries to the value of $145,000,000. We never before have bought so many luxuries abroad, so many diamonds, laces, pictures, wines, tobacco, furs and feathers—and we have never sold to other nations so small a quantity of the food-stuffs which only three-quarters of a century ago made up 75 per cent. of all our exports. And that means simply this. That the amount of gold which we as a nation pay for pure luxuries such as meet no absolute human need whatever, and without which we with our vast internal resources could live in all the abundant well-being for which we are famous now, is fourteen and one half times the amount of gold which we receive from other nations for our sales of foodstuffs—the fundamental necessity of existence. The other nations have not only ceased buying these of our necessities, they have immensely increased their sales to us of their product of the luxuries. We have entered into a new era in our trade relations—the era in which we must face these facts and deal with them—the critical period when we must manage to supply the unfavorable balance of trade with some substitute for the foodstuffs which formerly were the apparently illimitable foundations of our foreign commerce, but which are vanishing rapidly as our home consumption broadens and as arable areas in other countries enter into the world's great harvest with wheat crops of their own. The only substitute is our output of manufactured goods, and how to market them in sufficient and increasing quantities is the problem of this new period—the vital decade in the commercial history of the United States. In the mass the figures are impressive, and they point the way to truth. The balance of trade tends to swing against us, and we must find a larger foreign market for our manufactured goods.

"To such of you as are interested in securing a larger share of the trade in those world markets, I can say that nearly everything manufactured in America can be sold at a profit abroad. Now the first objection which we usually encounter when stating that proposition to an audience of manufacturers is that, on account of the high-

er cost of our labor, we cannot compete successfully with the manufacturers of other countries, where labor can still be had at a low price. It cannot be denied that in Japan and China, where fairly able labor can still be had for 15 cents a day, we have a condition which we cannot meet on anything but special terms. In such countries we must probably await the time when the development of labor through the customary experiences of the centralization of capital, the increased cost of living, the cost of organization, and the inevitable desire for better social position, education and refinement of living, will cause so low wage-scale in the Orient to advance upward to meet our own. There are many instances in which the slight remaining differences in the cost of labor on a manufactured article in America are nearly, if not quite, eliminated by our greater rapidity of production and of handling our goods to market. I doubt if many of us appreciate the reputation which our goods enjoy abroad for quality. And it is upon our superior quality, rather than upon the price, that high-grade goods will sell the better.

" Six or seven years ago the manufacturing of motor cars in Italy began to enjoy a sudden expansion under the influence of the spectacular victories gained by the marvelous Italian drivers, and by the good reports of Italian cars in service. At that time a feeble competition for the equipment for automobile factories in Italy was put forward by some of our manufacturers of machine tools, but Italian buyers, attracted by the low prices, the long terms of credit and the persistent salesmanship of the German representatives, bought their first outfit from our rivals, and put them into operation.

" It is significant of the true situation that today when the Italian motor trade has developed into the front rank among the great producers, it is equipped almost throughout with American machine tools, bought at prices running from 20 to 40 per cent. higher than the German prices, and on terms of payment so characteristically rigid and so thoroughly American that they had been before that time regarded as prohibitive. The American machine, higher in cost and delivered to the buyer at a much greater sacrifice of capital and credit than he had before experienced, works in operation at such a low percentage of charge for depreciation and repair that we secured the business almost in spite of ourselves.

" I was told the other day by a French engineer of long experience that an average motor engine, such as is produced in a French factory for a cost of $170, can be produced in America for about $100, so that here is an example where on cost alone, as well as in efficiency, we can successfully meet foreign competition. Do not take it for granted that the articles which you manufacture so successfully for the home market cannot be sold under similarly favorable circumstances abroad. Do not take it for granted that what you suppose to be an insuperable difference in cost will work out as an impassable barrier to sales. No people in the world are so careful and thrifty, and so open to the appeal of genuine economy, as the buyers of the continent of Europe, who have communicated these qualities with remarkable precision to the peoples of South America and the near East. No people in the world can be better approached with the argument of that truer economy which takes account of quality and service rather than of original price.

" Having selected your market you send an experienced salesman into it to place the goods before the trade, and before doing so you study the needs of the trade, and find out what the people in that territory want.

" In dealing with the foreign market as with the home market, you must have three elements to successful business: first, the goods; second, the salesmen; and third, a knowledge of the field.

" It is a common error among American manufacturers to suppose that having the goods they can do without the salesmen or a knowledge of the field; or that, having the salesmen, they need not be particular about the goods.

" As to the goods we may properly assume that we have them and the facilities for producing them at a cost not too high to exclude us from a fair competition in every market. We may assume also that there stands the fact of American quality, the best in all the world.

" It would be interesting to digress sufficiently to study that working out of our social system by which the American artisan, with his higher wages, his better clothing, his more wholesome and abundant food, his more comfortable housing, his wider mental outlook, and his infinitely more independent place as a citizen, produces a better article than his foreign brother in less affluent surroundings. The day can come, and it need not be far distant, when America can be the workshop of the world.

" A very common objection among conservative manufacturers is that if they send their goods broadcast into distant markets the foreigners will copy them and issue the imitations at a lower price. I shall not devote time here to a discussion of it, except to say that I believe such an attitude to be unworthy and un-American. There have been many instances in which American goods have been copied by our ingenious rivals. In some quarters it is a more or less regular practice, but it is not a regular practice in Europe or in South America, or in the near East, and in the instances which have come to my notice the copy and imitation have actually served to advertise and emphasize the superior quality of the American original.

" Patent protection and the safeguarding of trademarks are indispensable. No trade campaign should be undertaken on anything like a large scale, however, until the exporter has interviewed a skilful patent attorney who has had the kind of experience gained in handling foreign business and who has good connections outside the United States. The exporter must always be watchful to see that the rights accorded him by the patent are insisted on. If he has registered a trademark he must have his agents ever on guard to report either copies of it or efforts to so imitate it as to damage him. An interesting international arrangement for the protection of manufacturers, is that known as the union for protection of industrial property, which has its headquarters at Berne and in which the governments of Belgium, Brazil, Cuba, Denmark, Dominica, France and her colonies, Germany, Great Britain (with the right to introduce any of her colonies willing to join), Holland, Italy, Japan, Mexico, Norway, Portugal, Servia, Spain, Sweden, Switzerland, Turin and the United States have joined, with power to add to their number. Patentees having industrial or commercial establishments in any one country of the union can import their articles patented into any other country of it without forfeiture of patent rights. The application for a patent for an invention in any country of the union by subjects, citizens or residents of such country, gives provisional protection in all the others for one year.

Their Threads of Life are Spun

Once More the Hand of Atropos is in Evidence, Cutting Off Two from Our Roll of Members

CHARLES L. GATES

Charles L. Gates

The death of Charles L. Gates, at Spa, Belgium, September 2d, was a decided shock to the community, and caused universal expression of sympathy and interest. He had gone, with Dr. Elisha S. Lewis of Princeton, for the benefit to be derived from an ocean trip, his ailment being one of the heart. His passing away was the entering into a gentle sleep, without pain or premonition, and occurred when he had retired for the night.

In reviewing the field of business of our city, one would conclude there were few men more widely known than Mr. Gates. With his father, the late Larkin N. Gates, he received a training, as a builder and a judge of values, which gave him a position as the pioneer in the local real estate field. To recount the development of the many phases of this line of business in our city is to chronicle the growth of Mr. Gates' connection with it. In the early days of his partnership with the late Henry T. Farrar, and subsequently, he had been identified with some of the most important realty transactions. He was sought for because of his thorough knowledge, sound and well-balanced judgment, his integrity and honesty. His loyalty to his clients and their welfare was never short of untiring devotion, and it was never more apparent than when that person was one of limited means, where the utmost conservation was imperative. It is unnecessary to recount his achievements, so well known are they in the growth of our city. It could be said of him that possibly the new Slater Building was in a large part a monument to his genius as a business man and at his death he was its manager.

Mr. Gates was one of the older members of the Worcester Board of Fire Underwriters, and his connection with our fire insurance interests as an agent of some of the most representative companies covers an active and prominent career of twenty-five years. He had served with distinction in various capacities in the local board and was an ex-President. He was painstaking in his efforts to see that every client was dealt with fairly, and was held in high regard by the companies he represented. As a man among men he was universally respected and highly esteemed. He had an air of reticence, which came from a modest appreciation of his own ability and an inclination to withhold his opinions until they were sought, but when his judgment was asked, it was found his mind had grasped all sides of the question, and his expression was both forceful and convincing. In speaking of Mr. Gates' death, a member of the Fire Insurance fraternity said: "The older I grow, the more I am impressed with the fact that honesty and squareness count for about all, and that, if we can say of a man that he left the record of a fine character, it is the greatest thing in the world, and Charlie Gates was that kind of man."

Mr. Gates was a member of this Board and one of the Board of Directors at the time of his death.

HENRY W. KING

He was a life-member of the Worcester County Mechanics Association. He was a member of the Masonic fraternity, belonging to Montacute Lodge; Eureka Royal Arch Chapter; Hiram Council, Royal and Select Masters; Worcester County Commandery, K. T., and Aletheia Grotto. He was President of the Equity Co-operative Bank and a member of the Board of Directors of the Home Co-operative Bank. In this connection he worked long and faithfully, and outside his business no interest claimed more of his time, his keen foresight and sound judgment. In 1872 Mr. Gates married Emma Blood, who survives him. His mother, Mrs. Larkin N. Gates, and his brother, William H. Gates, both of this city, also survive him.

Henry W. King

Henry W. King, of the law firm of Rice, King & Rice, died at his home in Cambridge, Mass., September 5.

Mr. King was born in North Brookfield, October 14, 1856. His parents were George and Jane (Adams) King and his ancestors were among the early settlers in Connecticut. His mother, Jane Adams, was a direct descendant of Henry Adams, who settled in Braintree in 1630 and founded the Adams family in this country.

Mr. King received his early education at Phillips Exeter Academy and at Williston Academy. He continued his studies at Cornell University and the Harvard Law School. He completed his law studies in the office of Robert M. Morse and Richard Stone in Boston and was admitted to the bar in Suffolk County.

He began the active practice of law in North Brookfield after his admission to the bar, but in 1881 began to practice in Worcester, forming a partnership with the late Edmund B. Sprague. In 1882 the partnership was dissolved.

Mr. King continued his practice separately until February, 1884, when he entered into partnership with the late Hon. William W. Rice. In 1886 the firm became Rice, King & Rice upon the admission of Mr. Rice's son, Charles M. Rice. The latter and Mr. King continued the association, after the death of the senior partner in 1896, under the old firm name. While he had continued to retain his interest in the Worcester office, his practice for several years had been largely in New York City.

He leaves a wife, who was Miss Florence W. Fevre of Boston, and a son, George Adams King. Another son died in infancy.

Mr. King was a member of this Board, of the Worcester Club, and of other local associations.

Denver Freight Rates

At a recent meeting between representatives of the Colorado Manufacturers' Association and the Denver Chamber of Commerce it was decided to file with the Interstate Commerce Commission a petition asking for reductions in practically all freight rates to and from Denver. The application will be filed as a petition of intervention in the Salt Lake City case, decided by the commission three months ago in favor of the Utah shippers.—San Francisco Evening Globe.

Worcester and Atlanta

Both Believe that the Interests of City and Country are Identical in Many Ways

The need and the value of more intimate relations between the city and the country are cogently urged in the current issue of Progress, the official magazine of the Atlanta Chamber of Commerce. It is pointed out that although urban and rural communities are coming together in good will, one for the other, they are not yet working together definitely and practically on those enterprises that concern their mutual welfare.

This is a most timely observation, and especially is to be commended to chambers of commerce and boards of trade.

The interests of city and country are in a hundred important matters identical. There can be no municipal advancement except through the development of the surrounding territory, and rural progress is likewise dependent upon the growth of neighboring towns and cities. Yet, as a rule, when a committee from a board of trade or chamber of commerce is appointed to work out and execute some important enterprise, it is composed entirely of men from the city.

This should not be. The man from the country and the man from the city each has certain qualities which the other lacks. It is only their combined points of view and judgment and energy that can accomplish the soundest and most lasting results. They should know each other better, profit by each other's diverse experience and outlook and work shoulder to shoulder for the upbuilding of the whole community's good.

The Atlanta Chamber of Commerce has happily caught this idea and is pressing it into service. Some months ago the Chamber planned to encourage truck farming in Atlanta's vicinity by offering a series of prizes for the best products. At present it is engaged in promoting a corn show for Atlanta to be held next November or December. This is a specific effort to bring the country and the city into closer accord, and as such it is of extraordinary significance.—Atlanta Journal.

Manifests for Canadian Shipment

The Traffic Bureau of the Business Men's League has received the following communication from W. M. Porteus, agent in St. Louis of the Canadian Pacific Railway:

"Our traffic department advises that they have received word from the United States Government that very often cars are forwarded without shippers' manifests, which must accompany same, and they have been allowing cars to go forward on pro forma blank. As this practice has been abused, they have decided to discontinue this favor, and hereafter any shipment, whether carload or less, will be held up at the border by the United States Government, until the shippers' or owners' manifests are furnished. This might result in serious delay, inconvenience and expense, on account of the per diem charges on the cars. Would be pleased to have you advise the members of the Traffic Bureau to this effect."—St. Louis Times.

The city of Dayton (O.) will be asked to appropriate $5,000 a year for the work of the Chamber of Commerce.

Editorial Reflections

What Is a City For?

THE path of least resistance is the path still trodden by cities as well as men. All cities except Gary, Ind., have come up from small and crude beginnings to dignity, beauty and great wealth. Every city has some advantages, some attractions that render it unlike.

Within the past ten years cities have sought to coin these dissimilarities into population and dividends, and several of them, notably Cincinnati, O.; Portland, Ore.; Rochester, N. Y.; Detroit, Mich.; Des Moines, Iowa; Galveston, Tex., and Dayton, O., are spending large sums of money in campaigns of this sort. The World's Work, one of the leading magazines of the country, is soliciting contributions from commercial bodies generally, using these cities as an example, and urging them to go and do likewise.

Up to this time the appeal for settlers is based on the grossest materialism. The ordinary bait is of two kinds—either the presence in the community of large masses of people or else unusual opportunities to get rich quick. Very few cities seek to attract strangers as a permanent investment, because they are centers of intellectuality. Cambridge, Mass., with its great university is mute, but Greater Bitter Root, Mont., is vociferous. Seattle is known from coast to coast, but Salem is silent as the grave.

Is it possible that our cities contain men and, worse still, great corporations that can be seduced from their loyalty to the communities in which they have achieved their successes and built up their reputations by this use of printers' ink?

It is thinkable of course that a business might be subjected to such handicaps, such discouragements by reason of labor troubles or high taxation or insufficient railroad facilities that it might decide to remove to some more favored locality, but would it, if it desired to make such a change, consult the pages of a magazine in which all cities possessing the price could be boomed and boomed and boomed again, in order to find out where to go?

Is that the way in which our corporations are wont to do business, and if they did thus jump about, would their final destination interest their stockholders or the sheriff most?

Des Moines advertises itself as the City of Opportunities, and yet in the last issue of its commercial publication it declares that the greatest need of its citizens is more local pride, and asserts that it is difficult to secure Des Moines capital for Des Moines business, that its people are more willing to invest their money outside of Iowa than they are inside of it.

Much has been heard of Galveston and the Galveston plan of city government.

The newspapers and the magazines have teemed with articles on this modern cureall for the contagious diseases that afflict our city governments and no praise was too high to accord the city that boasted it. They have unitedly "pointed with pride" to Galveston and "viewed with alarm" Pittsburg. No city in the country has been so freely and so fulsomely advertised for years as the Texan tidewater terminal. And yet the census figures disclose the sad fact that Galveston is one of the few cities actually possessing fewer people today than it did ten years ago. As for Pittsburg, in spite of its survey, its graft and the bitterest grueling ever given an American community by press and pulpit alike, it is richer and more populous this minute than ever before in its history. It would appear after all that our people are singularly blind to pure Galveston and remarkably susceptible to impure Pittsburg. In other words the derrick of publicity does not always do the work for which it was created.

What, then, shall a city stand for, quality or quantity? It is said that Chicago is now larger than Berlin and closely rivals Paris. Is there any comparison between the three cities other than the mere matter of bigness?

Chicago is a mighty big city and a mighty enterprising one, but they make better furniture in Grand Rapids, finer photographic supplies in Rochester, a greater variety of delicious candy in Boston and more dependable automobile parts in Worcester than ever have been made in Chicago, and Chicago specializes in all these lines.

Even in cities the race is not always to the swift, nor the battle to the strong. There is still something to be said for the tortoise. That hard-shelled plodder along life's highway may not be very handsome, but he emphasizes to this neurotic age the length of days and great size attainable by one who takes it easy while he grows and devotes his entire time to growing.

It is unquestionably true that there is a tremendous fascination about a big town. The great city is the most stupendous depot for assembling the commonplace, the mediocre, the unfit and the failure known to man. It does not produce great men. They only seek it after they have come to greatness and require its stimulus and its associations to add the finishing touches to their careers. As Americans, we flock to the cities for two reasons—to make money or to spend it. We have observed that there are many rich men in the cities, and we take it for granted that there the Klondikes are located.

The cities seeing us coming welcome us, swallow us and cry for more. The daughter of the horse leech was modest in her demands in comparison with the devouring qualities of the modern metropolis.

Our censuses are now awaited with more interest than the outcome of a presidential election or an international boat-race. Anxious mayors denounce the over-worked counters for their slowness and accuse the principal officials of chicanery and intentional delay. Concerned lest their populations shall show a falling off, communities seek to annex all the smaller burghs in their vicinity, and Greater is come to be the most popular as well as the most over-worked adjective in the English language.

We have in the United States an increasing number of great cities. The question now arises, can they be made to count for something more than a place on the map? Is the entire balance sheet of our civilization to be struck off in these centres? Is the entire gamut of our achievements as a nation to be confined to two notes—an aggregation of units and an aggregation of dollars? Certainly our cities exercise a tremendous influence on the imagination of the republic, and so far their chief product has been numbers and money.

And this brings us to our final proposition: Will the United States ever justify its right to exist as a nation unless it changes the ideals of its cities? And will the cities themselves change their ideals and seek to attract to their innermost life the great painters and singers and thinkers of the age rather than the captains of industry? Will they seek the men and women hard to come by, but immensely rich in potential energy, who prefer the seclusion of the cloister to the blare, the friction and the jealousy of the cathedral?

The path of least resistance has given New York city four millions of people and Chicago two, and in all these six millions there is neither a painter nor a poet nor a philosopher of the first class. It takes a different environment apparently to produce a Turner, a Tennyson or a Thoreau.

One of the questions still unanswered even by the 13th census is this: Can our great cities be so deodorized that genius will flourish in them? Mechanical excellence, enormous population in constricted quarters, great wealth—these are the contributions and the only contributions made so far to our national life by our biggest communities.

Where is the community located that will put forth in the next ten years as much effort to get a great man as it will to get a great industry?

The Providence Convention

The Atlantic Deeper Waterways Convention held at Providence in the opening days of September was to all intents and purposes a southern gathering. Providence is a part of New England, to be sure, but as far as the delegates were concerned one would never have known it.

Some months ago at the Vendome in Boston there was a meeting enthusiastically attended, presided over by Loyed E. Chamberlain of Brockton, president of the Massachusetts State Board of Trade. Congressman J. Hampton Moore of Pennsylvania, president of the Atlantic Deeper Waterways, spoke, as did Congressman Small of North Carolina and Gov. Pothier of Rhode Island. Numerous other estimable gentlemen were there and all gave in their adherence to this worthy cause. Portland, Me., was represented and other towns in the Pine Tree State. New Hampshire had her representatives and Connecticut. Providence of course sent delegates and Massachusetts was particularly vociferous. Speeches were made, committees were appointed, a banquet was eaten and then the delegates went home — and forgot it.

At Providence there was hardly a corporal's guard from New England. Maine was silent, New Hampshire sent one lone representative; it is said that the secretary of the Hartford Board of Trade was present and distributed 20,000 pieces of literature, but if he did he must have disbursed them hurriedly—there were a few—mighty few—men from Massachusetts and the Providence hosts. A roll call one day disclosed the fact that in all New England there are 55 men belonging to the Atlantic Deeper Waterways Association. Of these 55 Worcester supplies eight;—further comment is unnecessary.

If one was inclined to sermonize, the above facts would furnish a pregnant text on which to loop the reason why New England gets so little each year out of the River and Harbor Bill. The Southerner is on hand when the pork barrel is opened. The Northerner is too busy cutting off coupons or cursing the politicians to go to Washington and log roll for his section. However, from Kill von Kull to Tampa Bay was out in force at Providence. From Jersey to Jacksonville there wasn't a break and every man jack of them knew what he was there for. He didn't go to Rhode Island for his health or to admire the scenery. He went there to find out when the canal is likely to be dug along the piece of coast in which he is specifically interested.

Why, the thing has gone so far that down in North Carolina they have got up a protest with a string of resolutions about a foot long demanding that the Dismal Swamp Canal be incorporated into the scheme between Chesapeake Bay and the waters of North Carolina, notwithstanding the fact that the United States Engineers have recommended that the government employ the Albemarle and Chesapeake Canal instead. This canal runs from Norfolk to Beaufort and is said with some dredging to be satisfactory and sufficient. The Dismal Swamp people claim that the rival canal, if chosen, will depreciate their property five millions of dollars and they are doing something about it.

Other Southern delegations were equally active. An attempt was made to germinate a New England headquarters, but it had the appearance most of the time of a rural camp meeting on the 15th of November—the chairs were there, but the atmosphere was bleak.

Not so with the Southerners; they had headquarters and they filled them. The men from Maryland were particularly active and aggressive. They fought each other bitterly during their meetings and then went out and unitedly shouted for Maryland.

The North Carolinians were not a bit behind them in loyalty. When one of the Worcester delegates was being registered at the general headquarters at the Narragansett, a big bony chap with a delicious Southern drawl came up behind him and said to the clerk over his shoulder: "Heve yo' all done got any No'th Ca'lina badges? I done got a Verginny badge 'bout soon's I got on the boat, but I ain't seen nary No'th Ca'lina badge nowhere. We have a blue badge, I reckon, and I'd like one. These yellow Verginny badges are all right, but us chaps from the Tar Heel State want one of our badges." The clerk shook his head and the man went away exceeding sorrowful.

It was the same thing all the way along. There was plenty of music. The band played "America" and the "Star Spangled Banner" at frequent intervals and there was some applause, but when it struck up "Dixie," there were howls of delight. Oh, yes, the delegates were from the South all right, and they didn't care who knew it.

The speech-making varied from the very poorest to the highest flights of oratory. One of the finest addresses of the Convention was made by Speaker Burchard of the Rhode Island House of Representatives. He spoke on the second day. He has a captivating presence, a pleasingly modulated and yet powerful voice, an enunciation resonant with New England purity, and back of it all a great brain. He spoke less than half an hour, but he marshaled his facts as Napoleon marshaled his legions at Austerlitz, and when he finished, after a splendidly rendered and most appropriate selection from Tennyson, he received perhaps the greatest ovation of the gathering.

Gov. Fort of New Jersey also spoke inspiringly, and Gov. Ansel of South Carolina proved to be one of

the wittiest of all the talkers. But the speech which perhaps produced the profoundest impression was that made by ex-Gov. Broward of Florida. It wasn't so much what Gov. Broward said as it was the way he said it. Broward is a big man with iron-gray hair, and there is power in his face and more in his frame. He has come up from the ranks literally.

Such as he is, he is every inch a man, and as he appealed to his auditors to stop fooling and talking and passing resolutions and go straight to Congress and demand one hundred millions of dollars to build this intercostal waterway, he looked like the kind of man who would fancy the job of demanding the money himself—and would undoubtedly get it.

No account of the Convention would be complete without recognition of the hospitality displayed. It was most profuse and most perfunctory. Nothing could excel the beautiful printed souvenirs of Providence given the delegates. In letter-press, in binding, in illustration, the official souvenir was an artistic marvel. It was accompanied by a superb badge, and by other specimens of unique typography almost as ornate and beautiful, if not as sympathetically bound, as the official souvenir. The entertainment at Rhodes on the Pawtuxet, and the sumptuous repast at Vanity Fair, where preparations had been made for 2,500 and to which 1,500 sat down, were all lavish in extent, unstinted in their prodigality. And yet there was with it all a sense of duty, of obligation, that robbed the affair of its chief charm. The delegates came and saw, but they did not conquer Rhode Island indifference.

The men from the What Cheer State opened their pocketbooks, but they did not open their hearts to their visitors. Next year the Convention meets at Richmond. It will be strange if it does not fall out that the delegates will find there fewer souvenirs and heartless printed matter, but more good red blood. The Convention must have cost Rhode Island and Providence a pretty penny, but it was carried out on a scale of magnificence possible only to a commonwealth indifferent to expense.

It may be asked: Why should Worcester interest herself in all this? She has no waterways and no prospect of any. It may be answered that anything that promises to furnish competition with the steam railroads to the southward ought to interest us, and does. Furthermore, it was stated on the floor of the Convention that one direct result of this proposed intercostal waterway will be to reduce the price of steam coal to the manufacturers of New England. It now costs $2.10 per ton to haul coal from Norfolk to Providence. When the inland waterways are constructed, the coal can be brought for 50 cents a ton. There are burned in New England every year 25,000,000 tons of coal, costing the people of this section $1,000,000. The saving to New England in the one item of coal alone will in one generation pay the entire expense of building an inland waterway from New York to the Gulf of Mexico.

It is said that "Providence provides." If she had provided nothing else than a place where men could decide that this task should be undertaken and carried to completion at once, she would have done well. She did provide more. She provided a celebration absolutely unrivaled.

The Duty of the Hour

The tariff revision, the attempt to provide a more elastic currency system, the increasing agitation over the high cost of living, the unrest in labor circles, the breaking up of the two great political parties, the contention over conservatism, have all kept investors on tenter-hooks. Added to all the other elements of mischief making has been the bitterness aroused this year by the announced increases in both passenger and freight rates by the railroads.

We are now on the eve of another political campaign with all the antagonisms of such contests in full swing. Men who are accustomed to think alike and to act in unity on every subject are drawing apart this year, not because of party differences, but because of the personalities of two great men.

In the meantime business marks time and the banker passes sleepless nights.

Nothing is more certain than this: that we cannot continue to tear down this government and have any system whatever left under which we can prosper. The newspapers and the stump resound with attacks upon this man and that, upon this corporation and that, upon this system and that. We are told that our banking system is unelastic and unsound, that our tariff is a fraud and an imposition, that our corporations are vicious and overcapitalized. In short, the times are completely out of joint. In the meantime the balance of trade continues to pile up against us. August imports were the largest ever reached for that month, totaling $138,357,380, and the balance of trade, which is ordinarily in our favor to the extent of hundreds of millions, is actually against us to an amount, for the eight months last past, of not quite a million dollars.

Commercial organizations have many and varied duties, but it would appear that one of the best things they could now do would be to cry a halt to the pessimistic tone of our American press and politicians. We believe that the organizations of this type in this country, if they would all unite, could exert at this time a profound influence for good upon the thoughts of the republic.

It is time that some attention should be paid to the business men and the business interests of the United States. The commercial organizations of the country were created for the express purpose of advancing these interests, and yet, so far as we know, not one of them has moved in the direction of refuting the slander that our great corporations are managed by scoundrels and that the acquisition of great wealth is a crime. Such statements industriously put forth for months have so inflamed popular prejudice that the thinking men all over the country with money to invest in the industries that have made America famous, are scared blue, and the money that ought to be in active circulation to carry on the business of the land has been deposited by them instead in the safety deposit vaults of our great banking institutions. We cannot imagine any more useful function the commercial organizations of this country can perform than to array themselves at once upon the side of the business life of the nation, now threatened from every quarter, and to exert as much energy to prevent a panic as the elements of disorder are exerting to bring one on.

Local September Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Co.

A fairly good start has been made during the month in retail lines for the distribution of fall and winter merchandise. The volume of business is holding up well by comparison. Manufacturers, as a rule, regard the outlook considerably improved.

Local bank clearings for August showed a total of $9,221,958, showing a gain of 39.8 per cent. over the corresponding month of 1909, when they totaled $6,601,553, a gain over 1906 of 52.5 per cent., when they showed a total of $6,045,791.

Failures in Worcester County for the month numbered six, with liabilities of $44,444 and assets of $6,655, compared with the corresponding month of 1909, when they showed a total of seven, with liabilities of $38,530 and assets of $19,450, and in 1906 they numbered three, with liabilities of $19,301 and assets of $10,645.

Portland's Second Opportunity

Thus does the Portland (Ore.) Telegram head an editorial that is typical of the breezy optimism of the West. The warning against self-assurance can be read with profit by far more cities than Portland.

"Portland growth is to be the municipal marvel of the West in the coming years. All the elements of industry and commerce and the population movement point to this fact. Railway construction in the tributary trade region is the most remarkable ever witnessed in a brief period within the bounds of a single state. People are coming to this vast, fertile region by the hundreds of thousands. Oregon's population has been assured a growth double its present number in a very brief time, and the authority back of this assurance is no less than the greatest developing power that has ever entered the West. All the Columbia Basin is developing and expanding at an amazing pace. By the unprecedented inrush of settlers, the unsurpassed natural resources awaiting them, the variety and wealth of productions possible, and the best of climatic conditions for the human family, the tributary region of Portland is given pledge of those things which make for wealth, prosperity and greatness.

"Portland must rise with the tributary country. Growth here will inevitably keep pace with that all about. By the time that Hill and Harriman railways have doubled the State's population, Portland should enjoy an equal increase. When the tonnage of lumber, wheat, fruit, livestock, dairy and other products has doubled for this region, Portland trade must double.

"Everything promises growth and power. As never before in her history, Portland must prepare for prosperity. Riches bring to the individual new opportunities and vastly broadened duties, and if worthily used, beget greatness and strength, but if taken as the excuse for idleness and luxurious ease, inaugurate decay. Portland's coming prosperity, greater than has ever been dreamed of before, will be the test of truly metropolitan prospects. If such a lethargy as that which lost Alaska's trade is repeated, if the conceit, self-assurance and listless disregard of competitive points that marked early days are to be permitted again, Portland's opportunity will pass with an evanescent glitter to cheer for a few moments only."

Worcester Patents

Hartley W. Bartlett, Patent Attorney

W. D. White, Water-wheel Governor, No. 955,568.

A governor for water-wheels comprising a power-cylinder having a valve-controlled passage for water under pressure, with the position of the valve determined by the speed of the motor. The invention particularly relates to shutting off the power from the power-cylinder at a pre-determined point in the movement of the piston.

John McTammany, Voting-machine, No. 960,034.

A voting-machine consisting of a casing having a flat, removable front wall, voting-lists on the face of the front wall, vote-tabulating mechanism supported by the casing, and arranged in the rear of the front wall, and a series of actuators carried and supported entirely by the front wall and having their rear ends disconnected from but in operative relation to the vote-tabulating mechanism, these elements being arranged and combined whereby the front wall may be removed, carrying with it the actuators, without affecting or disturbing the vote-tabulating mechanism or any part thereof.

C. H. Oslund, Drill, No. 963,317.

A drill mechanism consisting of a rotating sleeve, a tool-holding device rotated where the sleeve is rotated, a gear rotatable with the sleeve, a second gear meshing with the first, a shaft, a third gear on this shaft, means for connecting the second gear with the third gear and for disconnecting it therefrom, a fourth gear meshing with the third gear, a screw with which the fourth gear is connected, means on the tool-holding device for engaging the screw, the fourth gear being loose on the screw, a fifth gear on the screw having a different number of teeth than the fourth gear and meshing with the third gear, and a key for connecting either the fourth or the fifth gear with the screw.

R. E. Kidder, Die-press, No. 967,526.

A die-press in which a reciprocating head forces a cutting die through paper or the like to cut the paper into desired shapes. The device consists of a vertically reciprocating head, a work-supporting table, and a device for varying the position of the head relative to the table, comprising a rotatable shaft, a short shaft having a geared connection with the rotatable shaft, a hand-wheel carried by the short shaft, a frame supporting the short shaft, and means for adjustable holding this frame in a desired position.

Portland Wants Naval Station

The Portland (Ore.) Chamber of Commerce is pushing a campaign to locate in the Columbia or Willamette rivers the naval station for the Pacific squadron torpedo flotilla. Congress passed, during the last session, a bill appropriating $140,000 for such a station.

International Navigation Congress

The Washington (D. C.) Chamber of Commerce is hustling to secure the International Navigation Congress to be held in the United States in 1912, for which Congress appropriated $50,000 for entertainment at the last session.

Worcester Quotations

Furnished by Thompson, Towle & Company
Worcester, September 20, 1910

BANKS.

	Bid.	Asked.
Mechanics National Bank	160	
Merchants National Bank	170	
Worcester National Bank	210	
Worcester Trust Company	325	

RAILROAD STOCKS.

Boston & Albany	219	last sale
Boston & Maine common	134	last sale
Boston & Worcester Elec. common	...	10
Boston & Worcester Elec. pfd.	35	.....
Fitchburg preferred	125	last sale
New England Inv. & Sec. pfd.	90	92
New York, New Haven & Hartford	151⅜	last sale
Norwich & Worcester	210	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investments	75	80

INDUSTRIAL STOCKS.

Crompton & Knowles pfd.	150	..
Denholm & McKay common	200	.....
Denholm & McKay pfd.	100	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd.	110	114
Royal Worcester Corset Co.	140	.....
United States Envelope common	50	52
United States Envelope pfd	112	114
Worcester Gas Light	280	.....
Worcester Electric Light	280	290
Wright Wire Company common	102	.....
Wright Wire Company pfd	110	115

BONDS

Amer. Writing Paper 1st 5's	87¾	last sale
Boston & Worc. St. Ry 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles deb. 6's	5%	basis
Marlboro & Westboro St. Ry. 1st 5's	...	90
Norcross Brothers 1st 6's	99	100
United States Envelope 1st 5's	101½	102½
Worcester Cons. St. Ry. 1st 4½'s	94	.....
Worcester & Marlboro St. Ry. 1st 5's	....	100
Worcester & Southbridge St. Ry. 1st 4½'s	85	87

From the Field

The Tower (Minn.) Commercial Club held its first meeting September 7.

The New Hampshire Board of Trade meets in Claremont October 10th.

The Chamber of Commerce of Wichita, Kansas, has removed to new quarters on the tenth floor of the Beacon building.

In a recent contest, the Publicity Committee of the Carlisle (Pa.) Board of Trade awarded the prize to this slogan: "All for one—one for all."

During the past twelve months there have been organized in Maine ten boards of trade and a chamber of commerce.

Canandaigua, New York, will have a board of trade for another year, owing to the fact that they refused to accept a resolution offered by the Board of Directors advising the disbandment of the organization.

Current Events

General

Aug. 24. Six thousand children attended Tailltenn games of Worcester Playgrounds Association.

Sept. 1. Receipts at Worcester post office for August ($35,144.31) exceed August, 1909, by $1,934.42.

August records of Worcester port of entry show receipt of 690 packages, valued at $31,500, with duty of $13,584.

Registry of deeds records 1900 instruments in August against 1818 for August, 1909.

5. New England Fair opens with attendance of 35,000.

Industrial

Sept. 12. Harrington & Richardson Arms Co. secures permit for addition to plant.

16. Worcester Electric Light Co. seeks permission to issue 2000 additional shares of stock at $180 per share.

City Hall

Sept. 1. Tax levy calls for $2,423,640.28, largest amount ever raised in Worcester.

Total valuation is $140,751,250 against $133,384,202 in 1909.

Necrology

Aug. 29. A. H. Secord, at his home, 19 Gardner Street, of acute diabetes.

Sept. 2. Charles L. Gates, a director of this Board, at Spa Belgium, of heart disease.

6. Henry W. King, of Rice, King & Rice, at his home in Cambridge.

Local or Foreign Investors

Albert Phenis, long connected with the Manufacturer's Record, who knows the South in its industrial aspects as few men know it, cites in the article below an example from which every ambitious community in this country can draw a profitable lesson:

"Just now there are extraordinary attempts being made by several Southern cities to attract industries from the outside by means of large investments in advertising. I applaud the spirit of enterprise which has actuated these cities in their undertakings, for I believe it will be beneficial to have aroused the people of the respective communities to such an appreciation of the value of factories as their action indicates. Besides, I believe the expenditure will be worth all it foots up in the nation-wide attention which is likely to be attracted to the communities involved.

"At the same time I regard it as timely and helpful to call attention to the fact that never has any great industrial development occurred which was not fostered and valiantly backed up by the men and money of the place itself, and I am convinced that no effort, however elaborate and expensive, will produce results satisfactory to the people who are contributing to these great advertising funds unless the invitation to the outside world is accompanied by a frank and liberal readiness on the part of the moneyed men of the place to put their own means into well-founded and well-managed industrial enterprises, new or old.

"When any community has demonstrated, by the operation of the industries already on the ground, that conditions are favorable to the profitable conduct of any given line of enterprise, the outside investor is infinitely more impressed than he ever can be if he is confronted merely by a prospectus, however eloquently embellished it may be."

WORCESTER BOARD OF TRADE
EACH FOR ALL ALL FOR EACH
11 FOSTER STREET
WORCESTER MASSACHUSETTS
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
CHARLES H. BOSWORTH, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MACGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: ——
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

September Activities

Work of the Worcester Board of Trade for the Last Thirty Days Principally Devoted to Protecting Shippers' Interests

The principal business of the Worcester Board of Trade the past month has been co-operating with other eastern commercial organizations in the attempt to keep the freight-rates in this territory from mounting sky high. Incidentally, the Board has also been active in the struggle to prevent putting into effect Oct. 1 the new demurrage tariff in this section, reducing the free time spent in unloading freight-cars from ninety-six to forty-eight hours. Both tasks are somewhat momentous and are requiring a good deal of time and money.

As a result of a conference between Mr. D. O. Ives of the Boston Chamber of Commerce and Mr. Charles T. Tatman, president of this Board, it was determined to engage Mr. Louis D. Brandeis of Boston, senior member of Brandeis, Dunbar & Nutter, to represent the eastern commercial organizations in the struggle to maintain freight-rates at their existing level. Mr. Brandeis' connection with the Ballinger case is too recent to necessitate further identification at our hands. He has been vitally interested in public questions and in all great moral issues for many years. But his reputation as a fighter, as a searching and resourceful antagonist never stood as high as today. It was felt on all sides if he would take up the case for the shippers, that they would have the benefit not only of learned counsel, but of brilliant and determined leadership.

Those who followed the newspaper accounts of the hearings in New York, before the Inter-state Commerce Commission during the early part of September, must have been impressed with the fact that the railroads were finding it difficult at least to prove their case, and that one of the principal stumbling-blocks they encountered lay in the searching and unexpected questions Mr. Brandeis propounded. The shippers feel that as a result of his efforts the truth will be brought out, and if any advances are made that only such will be authorized as are fully warranted. The objection all along has been not so much to individual increases as to a sweeping advance on everything. If Mr. Brandeis succeeds in convincing the commission that the railroad's demands ought to be more moderate than those at first announced, he will have earned every penny that his services cost. It may be added in this connection that the Worcester Board of Trade, through individual shippers, is one of the few commercial organizations in the East that are bearing their financial share of the burden incident to this great legal battle. In this struggle as in every other similar contest, it is dollars and not resolutions that count. The railroads are spending their money lavishly to effect these increases. They can only be prevented from securing them by the use of the same medium and the employment of counsel equally able and costly.

During the closing days of the month, representative shippers from this city as well as from the other cities fighting this case were in close consultation with Mr. Brandeis. The burden of proof in this case, the Commission having suspended the advances, rests upon the railroads, but they have a chance to examine the shippers if they go on the stand, and it is probable that several of them will be called as witnesses before the case closes.

At the regular meeting of the directors Sept. 15, there were present in addition to the President, Mr. Charles T. Tatman, the Vice-president, Edward M. Woodward, and Messrs. Louis H. Buckley, Franklin B. Durfee, Daniel E. Denny, Albert H. Inman, S. Foster H. Goodwin and Arthur C. Comins.

A communication was read from the Merchants Association of New York asking this Board to take action endorsing the creation of what is known as the Reserve Bank of the United States. Mr. Paul M. Warburg, a member of the Committee on Currency of the Merchants' Association of New York has evolved this plan, which, it is claimed, provides no more than a legitimate extension of the banking facilities of this country. It is conceded that if such a bank is to be created in this country, it must differ radically from its prototypes in Europe. A bank that is to perform in this country functions like those exercised by the European Central banks must be adapted strictly to our needs and conditions.

It is claimed for Mr. Warburg's plan that, with it in operation, a currency famine and money panic would be impossible, the monetary reserve would be effectively utilized, the United States Treasury relieved of all responsibility for the money market, and international exchanges of movements of gold easily regulated, with corresponding benefit to all producers, distributors and consumers alike in every station of life.

The subject-matter has been referred to the Committee on Taxation, which has several bankers among its membership, and their view seems to be that any action taken by this Board at this time would be premature, pending the report of the National Monetary Commission.

An invitation was received from Galveston, Tex., to attend a City Commission Congress in that city, Nov. 21-23, to consider the commission form of city government, and the appointment of delegates was left in the hands of the President with power.

An invitation from the Great Northern Railway to participate in an excursion from Seattle to the Far East, leaving Seattle March 19, 1911, was read, and the Secretary was instructed to obtain further particulars as to the journey. It is understood that the trip is a complimentary return of the visit paid this country last year by the Honorary Japanese Commissioners and that extensive arrangements are being made in Japan for the entertainment of the American visitors.

Requests for endorsement of World's Fairs to be held at New Orleans and at San Francisco in 1915, on the occasion of the opening of the Panama Canal, were received, and under the circumstances it was decided to endorse neither exposition, the general feeling of the directors being that the exposition business in this country, commencing with the fiasco at Jamestown, had been rather overdone.

The National Guard Association of Massachusetts submitted a resolution asking this Board to request its members employing men belonging to the National Guard to give them the week needed for the summer encampment, with pay in addition to the customary vacation. It was voted that no action be taken in this matter.

The matter of electing a successor to Victor E. Edwards as director of the Board came up, and Mr. Ernest P. Bennett, of the Royal Worcester Corset Co., was unanimously chosen. Mr. Bennett has been a prominent member of the Committee on Foreign Trade, of which Mr. Edwards was the head, and Mr. Edwards handsomely endorsed him for his new position. Mr. Bennett has been an extremely helpful and interested member of the Board, and his elevation to the directorate will bring an additional inspiring influence to its membership.

The developments at Washington Square, now that the new Union Station approaches completion, made particularly timely and appropriate the recommendations of the special committee on Union Station tower, Arthur C. Comins chairman, which were embodied in the following resolution:

Resolved, That it is recommended by the Worcester Board of Trade that the City Council authorize the Mayor to employ landscape architects of notable ability in planning civic improvements to make a careful study of Washington Square and to offer specific recommendations as to its development, and that this action be communicated to the City Council.

This has been done, and the matter has been referred by the City Government to the Committee on Finance. It will probably cost some money to preserve Washington Square in its entirety, tower or no tower, but when one learns that the city of Providence spent $3,000,000 to secure the beautiful civic centre that she possesses in front of her station, it would seem as if Worcester ought not to be too niggardly in this emergency. Once lost, the opportunity to save this square can never be regained. It is certain that the action of the directors, if followed out in spirit by the City Government, will provide us with all the first-hand information that we need in order to act intelligently upon this most important subject.

It was voted to allow the Secretary two weeks' vacation, beginning with Oct. 1, and to send him as a delegate to the Convention of the National Association of Commercial Executives at Grand Rapids, Mich., Oct. 6 and 7.

Since the August meeting, Charles L. Gates, a director of this Board, whose term expired in 1912, has passed away in Spa, Belgium, whither he went with his physician to take the baths. He was in search of restoration to health, which had become sensibly impaired, and his death, which came with great suddenness, was a terrible shock to his fellow directors as well as to the business world generally. It was voted that the President appoint a committee on resolutions to bring in a suitable memorial at the October meeting. At Mr. Gates' funeral, which occurred Sept. 24, the Board was represented by a delegation from the directorate and the Secretary.

The meeting was brought to a close after reports had been made by the President on the present status of the freight-rate case and by the Vice-president and Secretary on the Atlantic Deeper Waterways Convention, which they had attended as delegates.

Williamsport's Latest Enterprise

The Williamsport Board of Trade has acquired an enviable reputation for doing things for that city. If it really undertakes to form a great syndicate to plant orchards on lands from which fortunes have been reaped in the shape of timber, but which are not suitable for ordinary farming purposes, there can be little doubt of its success.

In Pennsylvania are hundreds of thousands of acres of such lands that are producing nothing, that can be bought very cheap, and on which apples might be grown to great profit.

Because of rapid increase in population, apples, even in prolific years, now bring prices that a few years ago would have been thought exorbitant. They are going to be higher, much higher within a few years, even though there shall be a largely increased acreage in apple orchards.

The planting of apple orchards always has been discouraged by the long wait that must ensue before the young trees begin to bear, but there are few better means of investment for those who have the capital and can wait for returns. When once the picking begins the profits are great.

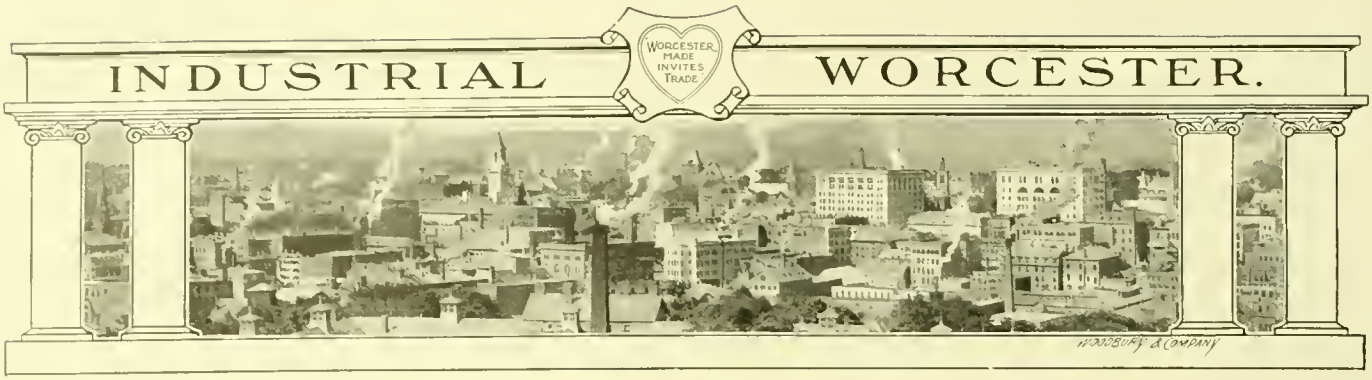
If the Williamsport Board of Trade goes ahead with its apple planting enterprise, with characteristic energy, it will do a fine thing not only for Williamsport, but as an object lesson for the whole State.—Harrisburg Patriot.

Coming Meetings

Public officials and civic organizations in all important cities of the United States have been invited to participate in a City Commission Congress to be held in Galveston, Texas, November 21-23.

The Trans-Mississippi Commercial Congress will convene in San Antonio, Texas, November 22d. The Chamber of Commerce will entertain several of the prominent guests at their annual banquet on the preceding evening.

The Buffalo Chamber of Commerce and Manufacturers' Club will welcome, during the week of November 14, the delegates attending the joint meeting of the National Municipal League and the American Civic Association.



The Government Census of 1910 Gives

WORCESTER

The Ideal Industrial City

A Population of

145,986

118,421 in 1900

Domestic Vacuum Cleaning Co.

A recent addition to Worcester's industries is the Domestic Vacuum Cleaner Company which has opened a factory at 28 Cherry Street. The company is incorporated for $10,000. Thure Hanson is manager, and the sole product of the concern is a new design of vacuum sweeper, the invention of Dr. F. J. Quist and S. Malcolm Blanch of this city.

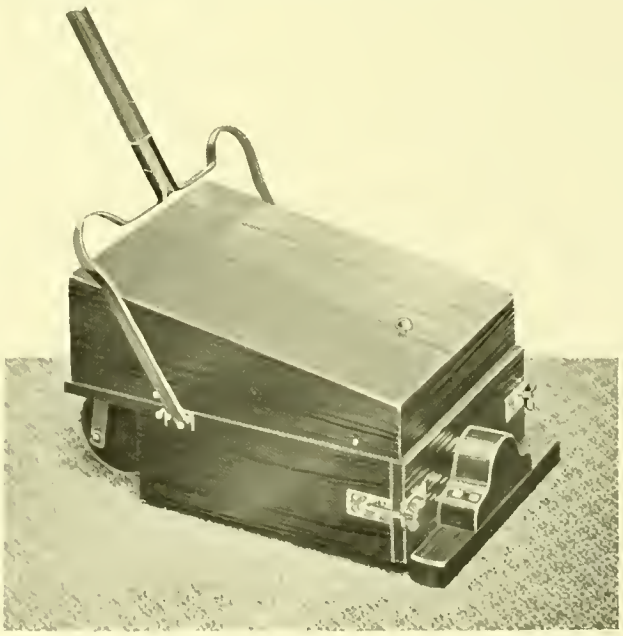
The sweeper is designed to be used in the same manner as the ordinary type of carpet sweeper.

The weight is eleven and one-half pounds, and it is claimed that it is as easy of operation as the brush form of carpet sweeper. It runs on rubber covered wheels. The nozzle is placed on the front of the machine and is raised and lowered by means of an adjustable roll, thus regulating the amount of suction. The nozzle is ten and one-half inches long and is made of hard wood. The makers claim that this feature is a great improvement over the ordinary type of vacuum cleaner nozzle made of metal. They state that it has been demonstrated that when in close contact with carpet or rug, the hardwood nozzle does less damage to the fabric, especially when the metal nozzle is not finely polished. The feature of adjustment is also strongly emphasized, as the nozzle does not usually come in contact with the pile of the carpet, and for this reason is far superior to the types of vacuum sweepers in which the nozzle rests upon the carpet, or to the broom and brush which constantly wear away the surface of the fabric, while the efficiency of their operation is less than half that of this new invention.

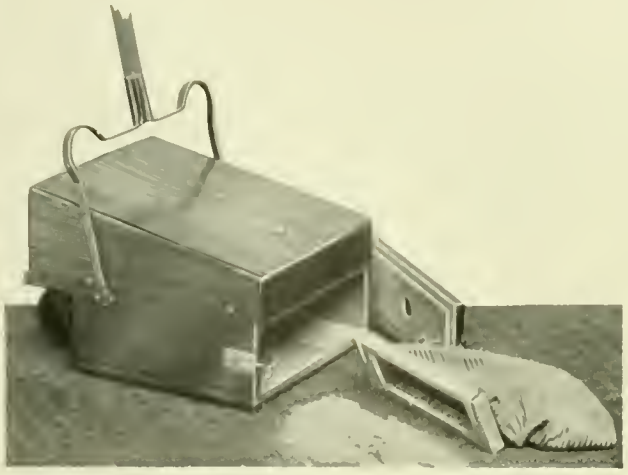
Strong claims are made for the simplicity of the mechanism, the finish and the general appearance of the Domestic Vacuum Sweeper. Typical Worcester worth is expressed in these statements of the company in the folder they are issuing.

"Every part of it is made by expert workmen. It is made to last for years. There is really nothing to wear out or get out of order. We guarantee the machine against any defects in workmanship or material for one year."

Most hand vacuum cleaners require two persons to operate, but this machine only requires one except when the hose attachment is used. This attachment provides for the cleaning of walls, draperies, furniture, etc., by the simple expedient of



Domestic Vacuum Sweeper



DOMESTIC VACUUM SWEEPER (OPEN)

moving the machine slightly backward and forward. The company claims that when thus used, its cleaning power is inferior to no vacuum cleaner designed for home use.

PORCH SHADE FACTORY

Dr. Julius Garst has purchased the Litchfield factory at the corner of Kingsbury and Bancroft Streets, and is installing machinery to produce a type of porch shade and the claim is made that it is the first factory of its kind in America.

The only goods of this character used in this country are imported from Germany, and Mr. H. E. Rathbun, who has perfected the special looms for making this product, states that the product of the new factory will be much stronger than the German make and that the price will be considerably less. The new loom has several unique features which we are unable to describe at this writing, as several patents upon minor parts are still pending. The basic patents have just been granted.

The material used is Maine basswood, which comes to the factory in strips two inches wide and a little more than one eighth inch thick. These are fed into a special machine, which separates them into nineteen strips, approximately one-eighth inch in diameter. The length of these strips is that of the desired width of the curtain, which may be any measurement up to twelve feet.

The strips are then taken on racks to the coloring room, where they are coated with oil paint to protect them from the weather. When dry, they are ready for the loom.

By the use of different colors in the warp, a great variety of patterns in stripes is produced. An interesting and novel pneumatic selective device in combination with a form of reed that is the result of years of patient experiment, produces a woven fabric for which the new concern expects to find a ready sale.

From lighter materials by the use of a Jacquard loom, a wood fabric will be made that will replace Venetian blinds for interior use. On this loom, with the use of stained wood and vari-colored threads, an infinite variety of pleasing patterns can be produced. This type of curtain for interior use is mounted upon the usual spring roller, and while excluding the sun's rays, admits a large amount of light and air.

Mr. Rathbun, who has the active charge of the factory, states that salesmen who are now out with samples are meeting a very favorable reception, and he is hustling to get the machinery installed to produce the goods in quantity.

CLAFLIN-SUMNER COAL CO.

The recent formation of the Claflin-Sumner Coal Company, whose general office is at 9 Pleasant Street, united two concerns which had their beginning in 1875. The original firms were C. W. Claflin & Co. and E. A. Sumner. In 1908 C. W. Claflin & Co. became the Claflin Coal Co. In 1903 E. A. Sumner was succeeded by H. E. Sumner, and in 1907 the name became Sumner Coal Co. Both had become large concerns, and when the Claflin-Sumner Coal Co. was formed, the combined business became one of the largest in New England.

The officers of the company are: Arthur O. Young, president; Edward W. Pierce, vice president; Howard E. Sumner, treasurer; George E. Copeland, assistant treasurer; and Henry L. Miller, secretary. Long years of service have given these officers an unusual equipment of knowledge and experience in the business of selling coal. Mr. Young has been furnishing coal to Worcester for thirty-five years; Mr. Miller, twenty-eight years; Mr. Pierce, twenty-five years; Mr. Copeland, twenty-one years; and Mr. Sumner, seventeen years. Numbers of the employees count their service by decades. For instance, the foreman at the big Grafton Street pocket has seen thirty-four years pass since he first wielded a shovel for C. W. Claflin & Co.

The company has four large storage depots, so located that every portion of the city can be served without long hauls. These storage depots are named after their locations: Shrewsbury Street, Grafton Street, Southbridge Street, and Ludlow Street.

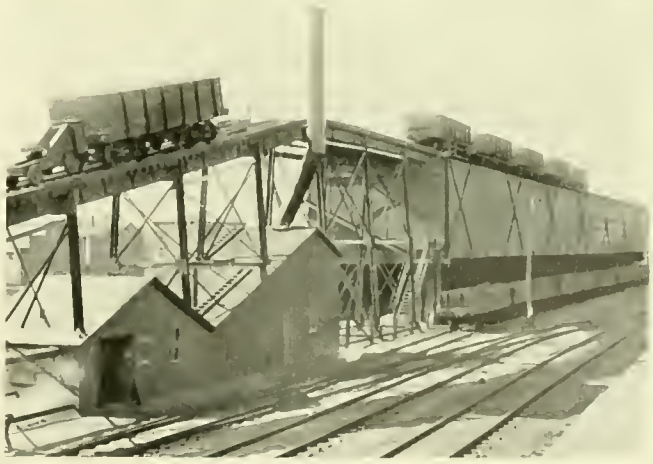
The big coal pockets at Grafton Street, shown in the illustration, are well worthy of description, as showing the magnitude of the Claflin-Sumner business. They are 320 feet long, 36 feet high and 32 feet wide. Their capacity is 5,000 tons, and auxiliary storage sheds at this point add 3,000 tons more.

The yard office and scales are at the Grafton Street end of the structure. From the opposite end a long trestle extends at a grade of thirty-three degrees to the tracks of the Boston & Albany Railroad.

The operating plant includes two sixty h.p. upright boilers and an eighty-five h.p. locomotive-type hoisting engine, which pulls the cars up the incline to the top of the pockets. A one and one half inch plow steel cable, 370 feet long, performs this task. In operation, this is attached to a special mechanism which descends into a pit below the surface tracks. By means of an auxiliary engine and cable, the loaded car is drawn over this pit and the big hoisting drum started. This brings the pulling head from the pit and the car is pushed ahead of it up the trestle. Here another auxiliary engine and cable allow the working crew to move the car to the hatch over the proper pocket. The type of cars now in use to transport coal is self dumping, and once a car is in position, a minute's work with a bar opens the dumping device and amid a cloud of dust, the coal rumbles and roars its way into the dark pocket below. One gets a conception of the enormous strength of this structure when he learns that at times, fifteen loaded cars, weighing fifty to seventy tons each, are resting upon the rails above the pockets.

A surface track extends through the centre of the pocket and three chutes can be operated at once, if necessary, from any one pocket to fill cars or carts.

The company carries these widely known brands of coal: Jeddo Lehigh, Lackawanna, Wilkes-Barre, Lykens Valley Franklin and Blue Grass cannel. Their leading bituminous coals are Big Vein Georges Creek Cumberland, Webster Smokeless and Beulah Webster. Their wholesale business is extensive, and they are equipped to handle orders of any size, either wholesale or retail.



REAR VIEW, GRAFTON STREET COAL POCKETS

Claflin-Sumner Company's Grafton Street Coal Pockets

Critchley Machine Screw Co.

One of the fastest growing concerns in Worcester is the Critchley Machine Screw Company, 100 Beacon Street, of which Mr. J. V. Critchley is sole proprietor. A little less than four years ago Mr. Critchley, with barely the needed capital to purchase his first machines, rented 2000 feet of floor-space at 25 Union Street. Here he installed two machines and started alone to make the varied forms produced from solid steel bars. Within a few weeks four more machines were added, and still Mr. Critchley was the sole hand—operator, shipper, sweeper, bookkeeper and salesman. Within two months he was compelled to hire an assistant. Constantly men and machines were added. Six months after the modest beginning, he admitted a silent partner, whose interest was bought two weeks ago by Mr. Critchley, who thus regains the sole control of the great business his knowledge and energy have built up.

After a year, the need of more room became imperative and the business was removed to the present quarters. Here eighty men are now employed, operating machinery conservatively valued at $75,000. It would be difficult to find anywhere a similar amount of floor-space so crowded with cleverly placed machinery.

The curiously human automatic machines, surmounted by a blur of swiftly moving belts, and literally devouring, hour after hour, long rods of solid steel of many shapes and all degrees of hardness, leave in the mind an impressive picture of resistless energy. Everywhere the ceaseless flow of streams of high-grade oil renders the work noiseless, and steadily from each machine drop shapes of wonderful accuracy—marvelous examples of man's mechanical ingenuity.

The plant is now turning out from 75,000 to 100,000 special screw-machine products every day, all turned from solid bars of steel.

Nearly 5000 different parts have been turned out in the four short years of the firm's existence, and it would be close to the truth to say that each day sees some new product being made. Certain forms, however, are in such demand that work on them never stops, and there was pointed out to the writer one young man who day after day turns out more than 15,000 of a certain form of small nut; more than 25 for each working minute.

Over three carloads of steel per month are needed to keep the plant supplied. One order alone—for brake-bands used on Buick automobiles—consumed 360,000 pounds of steel of one diameter. The minimum product for a year is 22,500,000 pieces. Worcester consumes a considerable portion of the output, but the rest is widely distributed. Parts are made here for nearly every known machine, but the greater portion goes into roller skates, bicycles, motorcycles, automobiles, pianos, gasoline engines, airships (an order for 20,000 parts is now in process of manufacture), guns, typewriters, electrical devices, and ball and roller bearings.

Skilled tool-makers and a well-equipped tool-room form an essential part of this plant. A department for hardening is also a most useful adjunct. An experimental room serves to keep the machinery and output abreast of the times, and to perfect automatic machinery that will maintain the high standard of the Critchley Machine Screw Company's products and result in greater economy in cost of production.

The demand for the products of this concern is so great that Mr. Critchley now has a long waiting list of manufacturers who desire to place orders. When one considers that no advertising has been done and no salesmen employed, the tremendous growth of this business is a sure indication that their output must certainly be well to the top among Worcester's excellent products.

NEW ENGLAND CORN EXPOSITION NUMBER

WORCESTER MAGAZINE

NOVEMBER, 1910

$1.50 per year

Published by the Worcester Board of Trade
WORCESTER, MASS.

15 cents the copy

FOREIGN EXCHANGE

Safe Deposit Boxes

ACCOUNTS SOLICITED

MERCHANTS NATIONAL BANK

WORCESTER, MASS.

F. A. DRURY, President
C. A. EVANS, Vice-President

A. G. DAVIS, Cashier
C. S. PUTNAM, Assistant Cashier

THE
WYMAN & GORDON Co
DROP FORGED
CRANK SHAFTS
FOR ALL MOTORS
STRONG TOUGH
AND
RELIABLE
THE BEST MONEY CAN BUY
WORCESTER, MASS.
SEND FOR
ESTIMATES
CLEVELAND
OHIO

TRADE
H&R ARMS CO.
MARK

Established 1871

Incorporated 1888

H&R ARMS Co

H&R

Isn't it a Beauty?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

20-gauge, 26 or 28-inch barrels, standard factory loads, black or smokeless powder, weight about 6 pounds.

28-gauge, 26 or 28-inch barrels, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. NOVEMBER, 1910 No. 11

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Edwin A. Benchley, Advertising Manager.

CONTENTS

SOME ASPECTS OF NEW ENGLAND AGRICULTURE—A COMPARISON AND A PROPHECY—A Half Century of Retrogression, the Present Trend and the Promising Future—By Prof. Frederick W. Taylor, 295-298

NORTHERN NEW ENGLAND'S NEW CYCLE OF DEVELOPMENT—An Optimistic Comparison of New England with the Central West—By Warren T. Billings, 299-303

FROM TACOMA TO WORCESTER—The Convention of the National Association of Commercial Executives 304-307

THE NEW ENGLAND CORN EXPOSITION—The Culmination of Two Year's Work by a Relatively Small Group of New England Men, Who Have Given Whole-heartedly of Time, Money and Labor to Advance New England Agriculture, 308-310

EDITORIAL REFLECTIONS, 311-312

The New England Corn Exposition.
Water Competition in Danger.
The Situation at Washington Square.
The Lesson of Grand Rapids.

DEPARTMENTS, 313-314

BOARD OF TRADE COMMENT, 315-317

INDUSTRIAL NOTES, 318-324

PLANERS

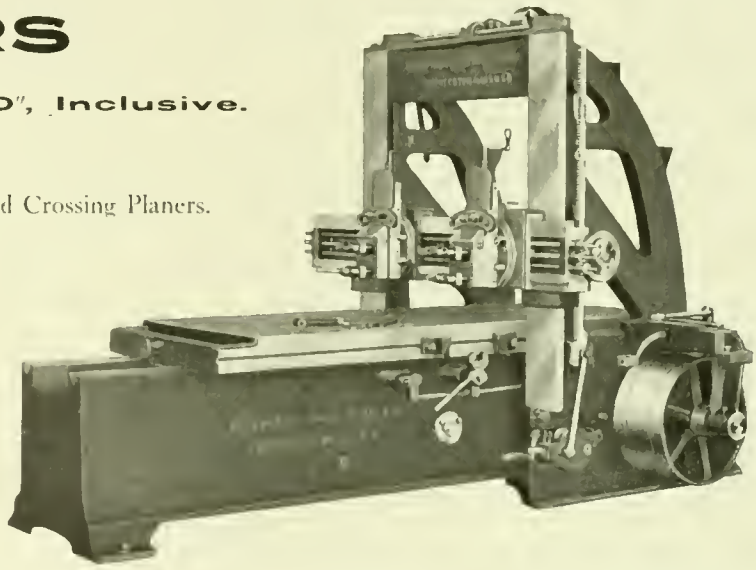
Sizes: 24" x 24" to 60" x 60", Inclusive.
Any Length.

Textile Feed Roll Fluting Planers. Frog and Crossing Planers.
Switch Point Planers.
Locomotive Connection Rod Planers.

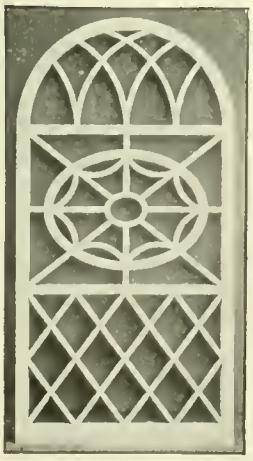
MANUFACTURED BY

Woodward & Powell Planer Co.
Worcester, Mass.

ESTABLISHED IN 1887.
Made in Worcester.



Does Five Times as Much Work as Could be Done in the Old Way.



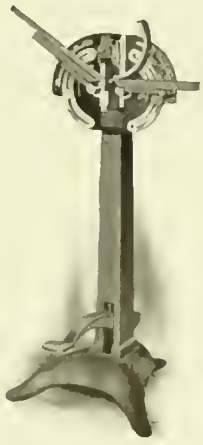
The Heald Machine Co., Worcester, Mass.
Gentlemen.—We have been using one of your "American Sash Trimmers" constantly for the last two and a half years, and are perfectly satisfied with its work.
It is a great labor saver, doing five times as much work as could be done in the old way, and doing it cleaner and better.
Yours very truly, Mohawk Valley Lbr. Co., Fultonville, N. Y.

The letter only tells of entire satisfaction. It would take pages to tell of the many details of satisfaction this machine offers.

A 30 Days' Free Trial

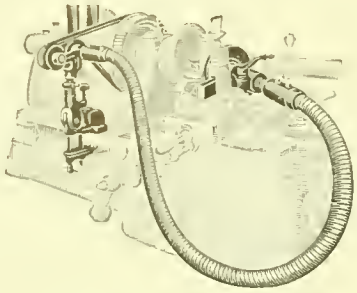
brings out all of these points. Just send us sample of your sash bar. We'll make up a set of special cutters and bed pieces to match. The machine will then be shipped you for thirty days' trial—no strings attached. All we ask is an opportunity to show you.

Heald Machine Co. Worcester, Mass.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

COATES Lathe Center Grinder



The simplest way to secure a perfect lathe center is to grind it.

The simplest way to grind it is with a

Coates Flexible Shaft Center Grinder

Fits any lathe—uses only the lathe power.

This is only one of the many useful portable tools we make for grinding, drilling, buffing, scratch-brushing, etc.

Get Bulletin W

Coates Clipper Mfg. Co.

Worcester, Mass.

HOWARD-WESSON-CO.

4 WALNUT STREET
WORCESTER

Successors to the

ART and HALF-TONE

Departments of
WOODBURY & CO.

ORIGINAL DESIGNS and Ideas for Advertising

HALF-TONE ENGRAVING Duotones 3 and 4 color plates

PHOTOGRAPHS of MACHINES, VIEWS and Manufactured products

UNSOLICITED TESTIMONIALS
From Leading Publishers, Printers, Advertising Men and Manufacturers Prove that the Designs and Engravings made by

HOWARD-WESSON-COMPANY

are original and attractive with right Printing Qualities and excellent selling values.

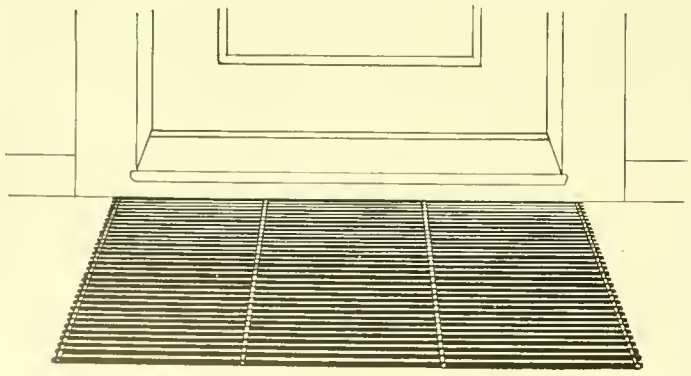
May we interest you in new designs and engravings?

MADE IN WORCESTER HOWARD WESSON CO

Always at your service
Telephones
2670-2671

THE ELASTIC STEEL DOOR MATS

(THE SEASON FOR THEM IS ABOUT DUE)



REDUCED CUT
3/8 INCH THICK

REVERSIBLE SELF-CLEANING INDESTRUCTIBLE

LIST PRICE, EACH

No.	PAINTED	SIZE, INCHES	No.	GALVANIZED
2	$1.80	16 x 24	102	$2.50
3	2.50	18 x 30	103	3.50
4	3.50	22 x 36	104	4.50
5	5.00	26 x 48	105	6.50
6	6.00	30 x 48	106	8.00
7	7.00	36 x 48	107	9.00

Subject to discount.
WE MAKE SPECIAL SIZES TO ORDER

BAR AND DRUG STORE MATS A SPECIALTY

THE WIRE GOODS COMPANY

WORCESTER, MASSACHUSETTS

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

Some Aspects of New England Agriculture—A Comparison and a Prophecy

A Half Century of Retrogression and the Reasons Therefor; the Present Trend under Changed Economic Conditions; the Future in View of the Increased Values of Western Farm Lands and Eastern Farm Products

By Frederick W. Taylor

(Professor of Agronomy, New Hampshire State College)

It has been stated so often by so many men in so many places that New England agriculture was steadily declining and was being gradually superseded by manufactures and other industries that there has come to be a popular belief that such is the fact.

While it is true that the Western movement and extension of agricultural operations which took place during the closing decades of the last century had a somewhat discouraging effect upon the agriculture of New England, it is not the truth to state that there has been a general decline or retrogression. We must all recognize the wonderful agricultural growth and development which the United States has experienced within the past fifty years, and which has been due, in large part, to the opening up and settlement of the middle Western states.

During the period from 1850 to 1900, the value of farm property, including land, buildings, implements, livestock and farm products in the United States, increased from four billions to twenty billions of dollars. During the same period the value of the same property in New England increased from 435 million to 640 million dollars. While the rate of increase for New England was not so great as that for the country as a whole, the figures at least seem to indicate a reasonably healthy maintenance of agricultural prosperity, because additional capital was constantly flowing into that branch of production.

A brief consultation of the census reports shows some striking figures of comparative productions here in New England for 1850 and 1900—figures impressive for the lessons they convey. They furnish a subject for much thought for the farmer of today who studies the achievements of his New England forbears.

A New England Corn Field

Livestock.

	Dairy Cows	Beef Cattle	Horses	Sheep	Swine
1850	608,000	861,000	212,000	2,258,000	361,000
1900	893,000	423,000	378,000	563,000	362,000

Cereals, in Bushels.

	Corn	Wheat	Oats	Rye	Barley
1850	10,176,000	1,091,000	8,101,000	1,571,000	414,000
1900	7,808,000	166,000	7,643,000	318,000	705,000

The two most significant facts about the livestock are the marked increase in the number of dairy cows and horses, and the even more marked decrease in the number of beef cattle and sheep. It would seem that the New England farmer had been alert to the demands of a rapidly growing urban population for dairy produce, vegetables and fruit, and had met these demands by keeping more cows and by devoting a larger portion of his labor and capital to market gardening and fruit growing, thus bringing into use much new and improved machinery, with the consequent utilization of more horsepower. The decrease in the number of beef cattle was due largely to the substitution of horses for oxen as farm motive power, and to the shifting of the meat and wool-producing industry to the West.

Cereal production in New England reached its high-water mark about 1850. The decline which began shortly after this and continued for five decades was due principally to cheaper production on the more fertile, easily tilled virgin soils of the West, which were just being exploited. The development of our modern systems of railroads has been another factor in this westward shifting of productive centres. Cheap transportation rates, fast freight trains and re-

frigerator cars have made it possible to place Kansas beef and Ohio butter on the Eastern markets in close competition with local production. The market value of a pound of butter and of beefsteak in New England is no longer determined by the local supply, but by the supply of the Western farmers, provided, of course, the packers and cold-storage men are not too active in their manipulations.

Another aspect of the situation which should not be overlooked is the supply of farm labor. This is a problem which all sections of the country have had more or less difficulty in solving, but it unquestionably first reached its most acute stages here in New England. The admitted scarcity of farm labor is the natural result of certain economic changes and processes which have been in operation for the past fifty years. These changes resulted directly in building up the New England towns and cities and indirectly in abandoning the rural regions. The three most prominent causes contributing to this abandonment were: first, an absolute loss to the several commonwealths of men taken by the Civil War; second, a loss of men by emigration to Western lands; and third, a depletion in the number of rural inhabitants by their exodus to the cities and towns.

A Second Crop of Clover

While the agricultural conditions a generation ago were not very encouraging for the New England farmer, they are much brighter today, despite the revelations of census returns. Good Western lands are no longer cheap. From 1850 to 1900 farm land in Indiana increased in value four times, in Illinois six times, and in Iowa seven times. Land in these states which could be bought fifty years ago for $20 to $25 per acre now commands from $125 to $150 per acre. Under such conditions it requires the most careful farming to secure even a fair rate of interest on the capital invested, in spite of the naturally productive soils. A great many Western farmers have gotten rich, but a large share of their wealth has not been taken from the soil, but has accumulated through good sales of land coincident with the rapidly rising land values. Another fact which must not escape our attention is that practically all the available Western lands are now occupied, and any increased production must come through more intensive methods of farming rather than through an increased acreage.

With the tide of emigration from the country to the city checked, with the rise in value of Western lands, with the increased demands for food products, with the higher prices of farm produce, and with the consequent lessened competition between the Eastern and Western farmer, opportunities for profitable farming in New England are rapidly increasing. Two years ago the writer visited a farmer who had come from Colorado and taken up one of the so-called "abandoned farms" of New Hampshire. He had repaired the buildings, fixed up the fences, turned over a large part of the old "sod-bound" land, was growing grain and forage crops and was making a success of the venture. When asked how he happened to come all the way from Colorado and settle down in the effete East, he replied: "Well, sir, after looking over a good many farms in various sections of the country, I came to the conclusion that I could get a better return for the capital invested right here in New England than anywhere else."

We have in New England about two hundred thousand farms with about one million people employed upon them. We have seen from the foregoing statistics that New England farms have given larger returns in the past than they are today. What, then, can this army of a million workers do to increase the returns and profits of these farms? This is a practical question and one that demands much thought and attention. In the first place, these farmers must be made to see the possibilities of their work with the application of up-to-date and intelligent methods. While it is true that the New England farmer is proverbially noted for his thrift and industry and, as a rule, manages his farm with economy, it is equally true that his general farm practice could and should be improved in many respects. Practices which our grandfathers found sufficing are now obsolete and new ones must be substituted. Instead of trying to cultivate fields which are too rough and stony to yield a profit, let these fields be allotted to forest or turned into permanent pasture. There are many acres of heavy clay lowlands and semi-swamp lands which are now practically waste which could be drained at a cost of thirty to forty dollars per acre and be made most productive. Many rough hillsides which cannot be cultivated, but which can be bought for five to ten dollars per acre, will afford excellent pasturage for sheep. We know that sheep can be raised, for in 1850 we had more than two and a quarter million of them scattered over our hills.

A successful Western farmer after an extended visit in the East said: "What New England farms need most is better horses and greater numbers of improved dairy cattle." The splendid markets of the East for draft horses should open an avenue for profitable returns along the line of horse breeding. It costs no more to keep a good cow than it does to keep a poor one, yet too many cows are being kept that are "eating their heads off" every year, and the farmer does not know it. Every animal on the farm is, in a sense, an employee, and if it proves inefficient it should be discharged. Another argument in favor of the keeping of more livestock is the manure produced. Instead of

marketing the hay directly as a cash crop, this should be fed to livestock and converted into a more concentrated product, with the consequent additional manure. New England farmers pay out annually about five million dollars for commercial fertilizers, which sum makes a big hole in the credit side of their bank accounts. With plenty of good barnyard manure, this hole would not need to be more than half as big.

A Well-Loaded Apple Tree

Among the cereal crops the greatest decrease in acreage and production has been that of wheat. Since the census of 1900, however, there has been a reaction and wheat raising is being revived, particularly in the northern sections. Both the spring and winter types are grown and an average yield of 25 to 30 bushels per acre is secured. In Aroostook County, Maine, the greatest potato section in the United States, the farmers are finding that one year with another the wheat crop is as profitable as the potato. It verily appears as if the old grist mill might yet "come back."

The oats crop has nearly held its own. The average yield per acre for the New England states in 1899 was 35.1 bushels against 34.9 bushels for the states of Illinois, Iowa, Wisconsin, Minnesota and Nebraska, which produce sixty per cent. of our total crop. This fact is a significant one, for it proves that New England is well adapted for oats raising. The climate here is not unlike that of Canada, Scotland or Denmark, which countries produce some of our best varieties of oats. Besides thriving best in a cool, moist climate, the oat plant does not require more than a moderately fertile soil, and can be grown very successfully on commercial fertilizers alone. As with wheat the value of the crop lies partially in the straw, which may be used as a sheep and cattle fodder and as bedding to be worked into manure. The straw-stack, which is such a familiar sight in every Western farmer's barnyard, could be well fitted into a system of farm management on many New England farms.

Although the census reports credit the New England states with a higher average yield per acre of corn than the states of the so-called "corn belt," our recent annual productions are several million bushels less than they were fifty to sixty years ago. There has been a feeling for a long time that we could not compete with the Western farmer in the production of this staple grain. This feeling, however, has been largely one of sentiment and not of fact. The farmer has simply gotten out of the habit of growing his own corn and gotten into the habit of buying it at whatever prices western conditions happened to put upon it. In an ordinary season corn, either for grain or ensilage, can be grown in all parts of New England except the most northern, if a variety is planted which has become acclimated.

In addition to the value of the ear corn, it should not be forgotten that the corn stover makes an excellent roughage feed for cattle. If well cured it has a feeding value equal to one-third that of mixed hay, and some feeders esteem it even more highly. Two tons per acre of stover can be secured on the average, which means an income of $8 to $10 in addition to the corn itself. Besides, there is no cultivated crop better suited to a system of rotation than corn, and no crop which responds any more readily to simple treatment.

With scores of scientific men interested in the growth of these great staple grain crops of our country, and with our most recent knowledge of the principles of breeding being applied to their improvement, the future possibilities of them can only be hinted at. Here in New England, we can already boast of a large yield per acre, but we should not be satisfied until we can also boast of a large yield per man. The fulfillment of this means more grain for New England and more profits for the New England farmer. A progressive, self-sustaining agriculture demands that we be smaller buyers and bigger sellers.

The range and diversity of crops for New England are almost unlimited. Hay is a universal crop, since nearly all of the cultivated grasses, including the clovers, find the soil and climate most congenial for a permanent home. This is attested by the fact that many pastures and meadows continue to produce fair yields of grass and hay year after year without reseeding. Tobacco in the southern Connecticut Valley, potatoes in Aroostook, Maine, and Colebrook, N. H., peaches in

Sixteen Strawberries to a Standard Box

Connecticut, maple sugar and Morgan horses in Vermont, Baldwin apples in New Hampshire, sweet corn in Maine, and turnips and turkeys in "Little Rhody" have been famous for years as specialized crops in their respective localities.

The dairy industry is a source of profit in all sections of New England. Vegetables and small fruits and poultry and eggs to supply the demands of the rapidly increasing summer boarding business, as well as the scores of cities, are bringing dollars into the pockets of enterprising farmers. With more attention being paid to the leguminous crops, especially the clovers, which

are pre-eminently a New England crop, the soils are being enriched and the purchase of expensive nitrogenous feeds is being reduced.

In the line of fruit growing there is a host of opportunities. The yield and quality of the tree fruits, especially the apple, are unexcelled by those grown anywhere in the country. To those unfamiliar with the products of New England orchards the displays at the recent fruit shows were a revelation. It is very gratifying to learn that these products are gradually gaining a reputation for quality and soundness not only in our best domestic markets but in foreign ones as well.

With the solution of the farm labor problem which is coming with the introduction of the more industrious classes of foreigners, together with the general "back-to-the-country" movement, a better day for New England farmers seems to be dawning. If our total population increases during the next twenty-five years in the same proportion as it has during the past, the increased demand for food must result in increased prices. It is evident, from the enormous increase of our city populations as is being revealed by the census returns of this year, that we are becoming less and less an exporting nation of farm products and more and more an exporting nation of the products of our factories, all of which must mean better markets and better prices for the products of our farms.

For the New England farmer, therefore, who will adapt himself to the changed economic conditions of today, who will grow the crops for which there is the greatest demand, who will aim to make a specialty of two or three products and get a reputation for producing the best of that kind, who will grow clover to maintain his soil fertility, who will rotate his crops and practice an extensive-intensive system of management, and who will exercise good business methods in the conduct of all his affairs, a competency with healthful and satisfactory conditions of living awaits.

The "Live Wire"

The Erie Dispatch Comments upon the Usefulness of Publicity of this Type

Buffalo is soon to have a magazine, published by the Chamber of Commerce and Manufacturers' Club of that city. Its object will be to "boost." Does not this contain a helpful suggestion to our many local organizations? Union between two great business organizations has accomplished more in one year than division did in five. Our local organizations may not be in a position to publish a 48-page monthly magazine, but by combining their interests and ability and energy, they may be able to do at least something in that direction. The foremost duty of those who desire to help in the growth of our city, is to spread abroad the good news of our wonderful potentialities. Bragging up and down our streets and in the columns of our own papers is usually nothing more than a species of vulgarity. A cultured man does not do this about himself, and a dignified city can dispense with it. But what every city needs to insure continual growth is to have the legitimate news of its attainments and its possibilities brought to the notice of such people whose knowledge of the truth about it may prove of reciprocal benefit to them and to us. The only shocking thing about the projected Buffalo magazine is its name. It is called "The Live Wire."

The Bonus in Canada

The Campaign of the Monetary Times of Toronto Against the Municipal Bonus

The following interesting letter, written by C. E. Carruthers, publicity commissioner, London, Ontario, to the Monetary Times, gives an insight of the way in which progressive Canadian cities are coming to view the bonus. The paragraph about Fredericton, as stated by the editor of the Monetary Times, shows how far the new industries will go in their demands.

"London is opposed to the giving of bonuses and gifts beyond a fair taxation and possibly a low water rate. I have found that the bonus cheapens not only a city, but the credit of Canada. Prospective locators are beginning to expect gifts which are not fair to the manufacturer who has helped build up a city without any help. When all the cities fight a fair battle, with the advantages they have as the ammunition, there will be a rise of Canada in the estimation of other countries. Patentees are obtaining gifts when cities know that they are forced to come to Canada to protect their patents. There are enough prospective locators for all in a fair fight for them."

The following cities and towns are opposed to the unreasonable bonus system: Berlin, Ontario; Calgary, Alberta; Edmonton, Alberta; Lethbridge, Alberta; London, Ontario; Moose Jaw, Sask.; Peterborough, Ontario; Regina, Sask.; Sarnia, Ontario; Toronto, Ontario; Welland, Ontario; Winnipeg, Manitoba.

Fredericton, N. B., proposed to bonus a company. The special civic committee appointed to consider the company's petition reported as follows: That when the company erect a building at a cost of $25,000, the city pay the interest at 5 per cent. on $10,000 of the said cost of $25,000 for ten years after the completion of the building. That the city provide a free site by paying an annual ground rent for twenty-one years. The company be exempted from city taxes for a period of ten years and be supplied with free water for ten years. The company is to carry on operations during ten years from January 1st, 1911. The output to be at least $50,000 per year. At least seventy-five hands to be employed and the pay roll to be at least $40,000 annually. On the 31st of December in each year the company to give a full statement showing the output, number of hands employed and amount expended in wages. The first of such reports to be presented on Dec. 31st, 1911. Should the company fail in these conditions the city will proceed to levy the assessments and cease to pay the ground rent on the plant.

Alderman VanWart opposed the section that the city become responsible for the interest on the $10,000, as it opened a gap which was hard to close. Any other company who had the misfortune to mismanage their business would have the same right as this company. The company's representative had stated that in 1908 they had a surplus of $10,000, and something was wrong if after a year or so they could come here and ask for this aid. He thought the offer first made to the company was as good as they could expect.

But the section passed without other discussion, Alderman VanWart being the only one to vote against it. It looks as though he was the only gentleman present able to see that Fredericton would be largely discounting its future by the bonus.

Northern New England's New Cycle of Development

An Optimistic Statement Wherein Convincing Facts and Figures are Arranged to Show that the New England Farmer of Today Possesses the Climate, the Soils and the Markets to Enable him to Obtain a Much Larger Net Income per Acre than Can be Secured from the Vaunted Farms of the Mississippi Valley

By Warren T. Billings

(Industrial Agent of the Boston & Maine and Maine Central Railroads)

God gave to New England its verdure-crowned hills
And littered its farms with stones—
The first to lend firmness to sturdy men's wills,
The latter to stiffen backbones.

SINCE the period immediately subsequent to the Civil War there has been a gradual but persistent decrease in the amount of tillage, relative value of production and market price of agricultural properties in northern New England, and the general effect has been retrogressive. During the latter portion of this term of decrease in farming the rise in the price of food stuffs has been rapid. Northern New England was once an important factor in raising nearly all the products which have increased in price, and it supplied to a marked extent the markets of the northeastern part of the country. There are those who believe that the lessened production has had a part in enhancing the value of the food supply. However that may be, and whether or not the increase in the cost of living is due to smaller supplies and greater demands, or to the avarice of hydra-headed trusts, as is often asserted, it is a generally accepted principle that it is not well for a community to permit its products of agriculture to lessen in amount if use can be found for what may be grown.

Success in any calling, at any time and in any location depends on meeting changed conditions as they occur and taking advantage of them as they are found.

Progress has been the order of the day in this part of the world ever since the Pilgrim Fathers blazed the way for a land of liberty, and the growth that was made excited the wonder of the world. Yet, in a certain sense, those of New England have known something of a reaction during the past half century and now realize that their cherished section needs to set forth on a second cycle of development.

Just why this is so is not a difficult question to answer. It is due to conditions which seem to have been beyond the control of its people. There was gold in California, there was cheapened transportation, there was a glamour about everything that bore the stamp of the West, a roseate aurora which tinged everything produced in the wondrous country between the Mississippi and the Rockies.

It was not all gold that glittered out there; some of it was dross, as many of us know, but it was new; it was different; and much of it was free. It was a wonderful region, and it is not to be marveled at that the temper of many men turned them from the environment of boyhood and led them to seek a fortune in the West. There was, too, the Civil War. It took thousands of noble men and made wanderers of many more. When vast numbers of citizens are called away from the scenes of home for two or three or four years, it is not surprising that many of them should seek further for the additional opportunities of advancement which they learn of. Thus many of the New England farms were left unoccupied when parents of the bearers of arms finished their course in life. In the three decades following the great contest there was, also, a demand from the rapidly growing cities of the nation for the virility and ability which good living on the agricultural areas of New England had nourished, and this helped temporarily to depopulate many farming sections.

If it is true that you cannot keep a good man down, it is much more positive and definite that you cannot keep a good community down. If one good man is bound to rise, then, surely, a section of good men cannot help it. So, northern New England is bound to rise; it is rising now, and however high the pinnacle of fame it once reached may have been, still greater honors and higher glory are destined for it.

The process of the development of a state is not unlike the growth of a lad well endowed in body and mind. No matter how strong physically or how able mentally he may be, it is impossible for him to reach the proper proportion through his own unaided efforts. He may grow in size without advice or lessons of experience, but he will not know how to utilize his strength and ability to the best advantage unless those of experience guide and direct him. And the development and growth of a great community must be guided and directed on the same principle; those who have its interests at heart and would see it triumph and come into those things which are its own must

A Maine Apple Tree in Full Development

Busy Workers in a New England Strawberry Field

chart the course to be followed and keep steady hand and true eye, that no disasters arise to interfere with the progress toward the goal of development.

Northern New England is bound to develop because the rest of the nation needs it. Particularly those who live in the northeastern portion of Uncle Sam's dominion are interested in the development. They want its dairy products, its corn, its vegetables, its fruits, its horses, its cattle and sheep as well as its lumber, fish and potatoes. They will need its falling water to furnish them with power and light, as well as manufactured goods, and its natural wealth to supply them with dozens of other necessaries. Already there are thousands who are unable to get along satisfactorily without its surpassing climate and magnificent scenery during the heated term.

What more is needed, then, to continue on the march of progress? Nothing but rightly directed and properly administered energy; and that is for the people to supply. They must know not only what to do and how to do it, but must go ahead and accomplish. There is plenty of material here for every man and woman and boy and girl to work with. They need to take a little ginger—the state will do the rest.

There may be difficulties to overcome—where are there not difficulties? In 1904 I happened to visit the Nez Perces Indian reservation in the State of Washington, just previous to the death of Chief Joseph, and on the way there, at a point where we were ferried across the Columbia River, I saw one of the most productive fruit orchards it has ever been my fortune to view. It was charmingly located, the peacock blue of the swiftly flowing stream and the dark brown of the precipitous coulees affording a picturesque setting for the deep green of the foliage. The comfortable residence and the commodious outbuildings seemed so much a part of the picture of nature's generosity that I congratulated the proprietor on finding such a fertile and profitable spot. "It is pretty," he replied, "but I had to ferry people for a good many years before I got money enough to develop this irrigation proposition, and I wish now it was a little nearer to market, because freighting is expensive."

Thus I learned that he, too, had had difficulties to surmount; that his prolific orchard and his pleasant home were all man-made, in the sense that he was compelled to utilize nature's forces and turn them to his bidding before he found a comfortable living and changed the character of that particular portion of the landscape.

As he irrigated, so it is necessary in northern New England to fertilize; and one undertaking is no more serious or expensive than the other. In New England they have the water and can secure the richness of the soil, just as the orchardist of the Columbia River had the fertile land, but was compelled to find a way to control his supply of water.

So these conditions are equal, but in northern New England there is one supreme advantage that my friend of the Northwest does not enjoy. Before he can get his fruit to market it has to be conveyed by stage nearly 40 miles, over roads clouded with alkali dust, to the nearest railroad station, and from there it is sent 90 miles by train to the city of Spokane, at which point there is only a limited demand. Where in northern New England is it necessary to struggle against such a disadvantage as that—why should the men of this section hesitate to raise fruit when such pioneers as he overcome obstacles and get their goods to the consumer at a profit?

As distance lends enchantment to the view, so it minimizes the difficulties which confront every one who strives to go forward in life. Only a short time ago, one of the most erudite judges of the Supreme Court of New Hampshire reminiscently remarked to me that he sometimes wished he were a young man again so that he could strike out into the West without a cent beyond his carfare, take up a homestead area and develop a paying farm and comfortable home.

He was enshrouded by the glamour of the West, and distance had minimized the hardships before a young man who undertakes such a mission. He had not considered secluding himself miles from human habitations, without the consolation of companionship, the solace of a library, the comforts of a church, or the refining and uplifting influence of good men and women. I asked him if he thought he would enjoy living in a sod hut (he did not stop to think of the difficulty of getting timber or brick for a habitation), and if he could stand eating bacon and salt pork and flour flapjacks day in and day out, until, after two years or more of the utmost desolation and discomfort, he might have sufficient money to improve his condition.

"Why, for the price of the carfare," I told him, "you could get in New England an interest in an excellent farm property, near profitable markets and comfortable conditions of living, with fully as good a chance, if not a better, to develop to extensive agricultural operations."

But the glamour of distance held sway. He thought the young man who went West had better opportunities than the one who remained at home. If that is true, then I assert that the Western young man has better chances if he comes East than if he remains near the surroundings of his boyhood. Environment, doubtless, has much to do with a man's future, but when it comes to making a profitable living from the soil, New England need not, should not and will not take a second place in rank to any Western prairie remote from civilization.

Here is one of the points which goes to prove my contention: The freight rate on the production of an acre of corn protects the New England grower to the extent of $10 per acre. A professor in the University of Maine told me recently that it costs the New England grower $2 more to produce an acre of corn than it does the men on the extensive fields of Kansas and Nebraska, with everything considered. Therefore, for corn used in this section of the country, the New England grower can secure $8 per acre more than the farmers who raise it in one of those Western states.

Those are hard-pan figures, and they are supported by the census report of 1900. Why, then, is not corn produced more extensively in this corner of the country?

Not many years ago, when land was low in the West and high in the East, it probably was true that this $8 differential did not exist; the Western producers enjoyed advantages over their Eastern brethren for which even freight rates could not commensurate. The old order changeth. The Westerner then raised corn on the land which the government was willing to give him if he would establish his home there; today much of that land is worth $100 per acre. The farms of New England at that time were producing diversified crops which provided a good family living, and the feed from the low-priced Western farms was sold in Boston cheaper than the New England farmers could afford to raise it. I do not wonder that the

A Massachusetts Strawberry Packing Shed

Eastern men stopped growing it. I would do the same. But as the irresistible worker of destiny continued on his cycle of development, the New England farmers lost a lap on the course and neglected to pick up the lines which they dropped when it seemed that Westerners were going ahead of them. They have not recognized the change in conditions and, despite the fact that it will pay them to do so today, they have not yet begun to raise corn extensively again. Until they do, the public will see the price of milk, butter, cheese, eggs, beef, poultry, pork, lamb and mutton continue to rise, and all the boycotts and agitations and arguments devised, suggested or arranged, from the time of the birth of Adam to the final resonant reverberations from the horn of Gabriel, will not make it otherwise. The relief from the high cost of living, or the cost of high living, whichever way it is wanted, must come from the development of agriculture, and, for the relief of us right here in the northeast corner of the dominion of Uncle Sam, that development must be of New England soil.

Pleasing Arrangement for a Maine Apple Orchard

One feature in agricultural progress I desire to refer to particularly—the omnipotent, all-necessary, much-abused and much-misunderstood hen. Massachusetts uses annually over $25,000,000 worth of poultry and eggs. It produces $5,000,000 worth. New Hampshire, Maine and Vermont raise but little more than is required for home consumption. This means that the major portion of $20,000,000 of Massachusetts money is sent to New York and the West, when there is absolutely no reason why practically all of it should not remain in New England.

Further, the poultry department of Cornell University, one of the most efficient in the United States, tells us that, while feed costs the New England poultry producer about 10 per cent more than it does his Western competitor, the New Englander has an advantage of 30 per cent in the cost of land, expense of building material, rates of freight and contiguity of markets. This means that the net cost of raising poultry in New England, hen for hen and egg for egg, is 20 per cent cheaper than it is in the West.

Picking Time on a Ten-Acre Field in Maine

Consider well that 20 per cent advantage and then determine that the $20,000,000 of Massachusetts money shall be made to stay where it belongs—in northern New England.

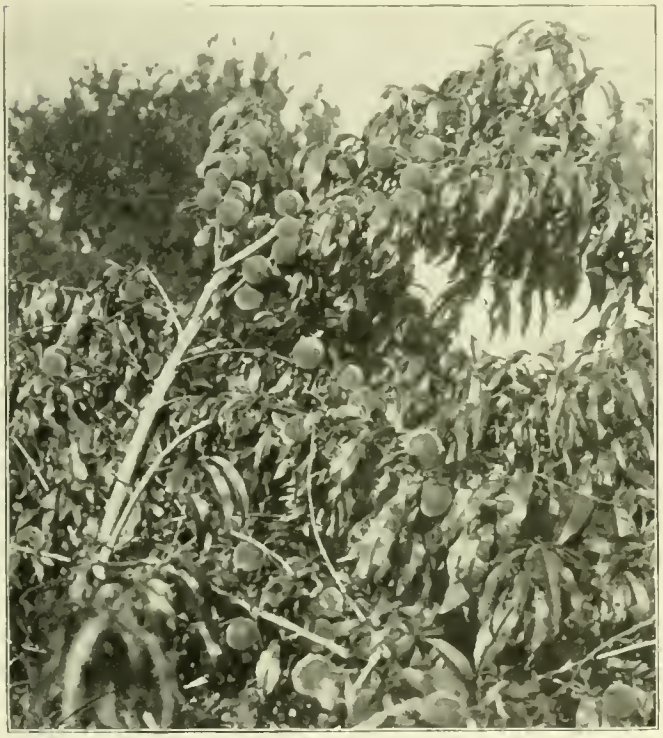
Without home-grown corn and other grains, however, New England cannot successfully raise poultry, swine or cattle. There might be a chance if the present high prices continued, but the fundamental basis of agricultural success rests on the production of feed at home, and the cornerstone of that basis is corn. Agriculture in New England is going to develop; the people are going to grow grain enough to feed the hens and pigs and cows, but it will be only after agitation and numerous severe lessons of experience, and the agitation and the lessons are coming to us every day.

It is not for the state to carry on the work of New England's development, it is not for a corporation, an institution or an association. It is for the people themselves. Help is bound to come from immigrants, men and women from other parts of this country and from European shores. Some will be the sons and daugh-

As a New England Strawberry Field Should be Cared for

ters of New England, or the sons and daughters of sons and daughters. All will assist. The main work, however, rests on those now dwelling in the chosen region. To them is given the knowledge of the promise of the land and to them will come a recognition of the magnificent possibilities of this territory. More than that, the forward movement is now at hand. Every day brings converts to a realization of the richness that New England offers.

The 1910 census shows that Massachusetts gained in population during the past decade 20 per cent. Missouri gained 6 per cent. Is not that a convincing lesson for those who would learn? Does not that show the trend of development? Does not that mean New England is progressing in a manner worthy of our continued best efforts?



A Branch of the Mountain Rose Peach Tree as Grown in New Hampshire

The facts are convincing, the situation is promising, the opportunities are encouraging—is there any reason why every loyal son of New England, native and adopted, should not put his shoulder to the wheel of development?

A Lively "Old Settler"

The New Haven Chamber of Commerce was organized in 1794, and has been doing business in this city ever since. There have been periods, to be sure, when it hasn't seemed to be "doing much at it," but that it has all the time been more alive than some of its critics realized, is evident from its present active usefulness. From last night's meeting, for instance, it may be observed that it is a lively "old settler."

Not content with its thousand or more, the Chamber last night added 11 new members.—New Haven (Ct.) Register.

Where Scranton Lacks

The Scranton (Pa.) Times Recites the Old, Old Story of the Lack of Support for Local Industries

We have on several occasions censured certain of the local investing public, men of big as well as limited means, that they are ever ready to invest capital in distant get-rich-quick schemes as presented by nimble-tongued agents and prospectors, and the more glittering the bait the more eagerly swallowed, with later regret. We have also censured the boards of trade, particularly the central body, in claiming credit in bringing or starting about every industry, big or little, that has come to the city, but precious little effort was made to foster, encourage and assist industries when established, and as a consequence a large number in years past of local concerns have been crushed to the wall, simply because of a little additional capital not being furnished at a critical period.

We blow and hurrah and make a great noise if some person or corporation from a distance talks of locating in Scranton, or of the institution of a new concern, but it is far more important after an industry is established to tide it over an emergency than to let it go to the wall or in the hands of a receiver, and to throw people out of employment who have come to the city to secure work in the concern, and are obliged to sacrifice more than mere wages by the plant closing down.

Not only in Scranton, but in other cities, it is a failing that new industries start out with insufficient capital. Business increases, credits must be extended to customers, raw materials purchased, manufactured goods more or less kept in stock, and the time comes when the original capital is eaten up in the lines above noted, and money is borrowed as far as collateral permits, and then an appeal is necessary to stockholders, or new stock and bonds offered to the public, but the very fact that the concern is hard up for ready cash invites the fear of people with money to invest, no matter how many orders and how encouraging the outlook may be, if a little ready cash was available to tide over the emergency, and failing to sell a new stock or bond issue, or to borrow, the corporation goes into the hands of a receiver. The books and accounts, the orders received and prospective, the advance in the corporation's business, in local concerns in need of capital are open to capitalists, but they would rather throw thousands into some of the mines and concerns as noted in yesterday's Times, in the government raid on a New York brokerage office, than to place a local industry on solid ground, and made to pay big returns, furnish employment to hundreds of hands, and help Scranton grow.

If we want to see Scranton grow there is much home work to be done, beside shouting, and exhibitions. Let us encourage the home industries in our midst before attempting to entice strangers, only to turn the cold shoulder after they have sunk their last dollar in the effort to establish a paying concern.

It is gratifying to learn that in the case of the Scranton Steam Pump Company, the receivership is the result of an amicable arrangement, with the object of best conserving the interests of the creditors and stockholders, and we hope that the result of the receivership will be to re-establish the corporation on a firmer financial basis, with increased business and prosperity.

From Tacoma to Worcester

All Roads Last Month Led to Grand Rapids and to the Annual Session of the Commercial Executives of the United States and Canada. The Men who Gathered in the Furniture City Represented Communities with an Aggregate Population of 11,785,696. Plans of Great Commercial Moment Discussed and the Worcester Board of Trade Honored at the Annual Election

TO Grand Rapids, Mich., the beautiful and famous furniture city, midway between Detroit and Chicago, came last month the wise men of the East and the still wiser ones of the West to attend the annual session of the National Association of Commercial Executives which was held there Oct. 6 and 7.

It was the fifth runtogether that these secretaries have had in as many years, and never in the history of the association has there been a more harmonious or inspiring gathering. Grand Rapids is a bad town for a man with a grouch. A place in which they sell Montreal melons for forty cents and porter-house steak for twenty-four has no use for the blues. Every man in Grand Rapids is on his job, and most every man is on two jobs. The houses breathe an air of culture and prosperity and the stores are filled chockablock with up-to-date goods. Reliable and conservative newspapers, fine churches, including a Polish edifice with a dome on it like the Massachusetts State House, an aristocratic and yet home-like club, and biggest and best of all, multitudes of factories filled with busy and contented workmen, conspire to answer the question: Why is Grand Rapids?

It is not at all wonderful that such a town with its 115,000 inhabitants should have a live Board of Trade of 1,400 members. The Secretary of this body, Clarence A. Cotton, was the Secretary of the National Association of Commercial Executives last year, and it was due to his influence and work that the convention was held in Grand Rapids and was such a pronounced success. But it is only the truth to say that his work would have gone for naught if it had not been buttressed by the work and influence of his entire board.

From the time the secretaries entered the city until on Saturday they reluctantly bade their hosts adieu, the men of Grand Rapids were untiring in the courtesies extended. Luncheons, banquets and automobile rides comprised the set features of the programme, but these were only the outward and visible signs of an inward and profoundly characteristic courtesy which bubbled to the surface over and over again during the four days the delegates were within Grand Rapids' gates.

It is not the purpose of this article to review in detail the events of the session. Most of the discussions were of more or less technical nature bearing upon the work of commercial organization, or else frankly booming the communities in which the speakers were located.

There were, however, several features incident to the convention which will serve to make its work of a more permanent and valuable character than any of the conventions that have preceded it. Up to this year the organization has conceived it to be its principal business to devise new and unique methods of "boosting" a city. But this year, for the first time, the beautification of a city rather than the blazoning of a city came in for a hearing. As Mr. Cotton expressed it, "the time has now arrived for us to capitalize our ideals."

From Worcester to Tacoma—The Representatives at Grand Rapids of

Speaking of this matter W. B. Moore of the Dayton, O., Chamber of Commerce said, "The smaller towns in the vicinity of the great cities must inevitably disintegrate. The attractions that the larger places possess in the way of superior schools and churches, and particularly places of amusement, are bound to attract and hold the people from the surrounding towns. Nothing seems to be more characteristic of the United States than the influx to the cities, and the larger the city the more strongly the tide sets toward it.

"Under the circumstances the city that beautifies itself is the city that will most surely attract the skilled laborer. Cleveland and Detroit are two potent examples of how closely the city beautiful and the city industrial are bound up in each other.

"In no two cities of the middle West do the commercial organizations find it easier to 'land' new industries than in Cleveland and Detroit."

Comment is unnecessary.

The way to get new industries is not to go out and lasso them and drag them in, but to make the city so attractive that the new industry will be anxious to locate in so beautiful and enterprising a centre.

Another forward step was taken in the unmistakable sentiment against the giving of bonuses. Mr. C. F. Perry of Quincy, Ill., led the fight against these pernicious "bribes," as they were not inaptly termed, and with very few exceptions the secretaries placed themselves on record as being opposed either to free grants of land, exemption from taxation for a period of years, or the giving of a sum of money to a concern to cause it to locate in any particular town. It is believed, as a result of this convention, that less of this kind of thing will be done in the future than has been the case in the past. Instances were cited of "fly-by-night" concerns that make a business of moving from one town to another for the purpose of securing tax exemptions or bonuses, and it was felt that the evil was one that should be frowned upon and not encouraged by commercial bodies.

The Canadian point of view was correctly and eloquently set forth by George M. Murray, secretary of the Canadian Manufacturers' Association, and by F. G. Morley, secretary of the Toronto, Ont., Board of Trade. The Canadian representatives are always among the brightest men at these conventions, and this year, as heretofore, Canada put her best foot forward. It is certain that no one rejoices more to see our neighbor to the north advance and prosper than the representatives of the commercial life of the States. Mr. Murray always states the case for the Canadian manufacturers forcibly, and it is evident that he is as loyal to his section as the most enthusiastic baseball fan is to his favorite club. Mr. Morley was one of the most gentlemanly figures at the convention. His organization in the great city of Toronto, a port of entry, and one of the greatest commercial depots in the Dominion, still retains the fine old title of a "Board of Trade." When one comes to compare such an organization with "Chambers of Commerce" located in little cities of 12,000 inhabitants hundreds of miles distant from tidewater, and as ignorant of a custom house as they are of the atmosphere of Mars, one is forced to the conclusion that there is still something to be said for dignity and conservatism.

John M. Glenn, secretary of the Illinois Manufacturers' Association, one of the most active branches of the National Association of Manufacturers, talked intelligently and interestingly about foreign trade, and Henry Tarleton Wills, of New York, told why he thought the tariff ought to be revised. The fact that Mr. Wills is Secretary of the National Tariff Commission Association, may or may not color his views. He is very sure, however, that the recent revision of the tariff was a failure, and says the outcome reminds him of the boy who attempted unsuccessfully to learn to eat asparagus. When asked later if he liked asparagus, he replied, "No," and when asked "why," replied, "Because it is raw at one end and rotten at the other."

THE LEADING COMMERCIAL ORGANIZATIONS OF THE UNITED STATES AND CANADA

CLARENCE A. COTTON
President National Association of Commercial Executives

This year, for the first time, a representative of the railroads had a place in the programme. Mr. Ira H. Shoemaker, industrial agent of the Delaware & Hudson, was the gentleman in question, and he gave a very concise statement of the way in which the railroads and commercial bodies can work together in bringing new industries into a community. Mr. Shoemaker is one of the keenest men in his line in the railroad world, and the Delaware & Hudson is fortunate in having such a man in its employ. On the other hand, the country through which this road operates is fortunate in being served by such a railroad. The southern terminus of this line is Wilkes-Barre, Penn., the western is Binghamton, N. Y., the extreme eastern is Rutland, Vt., and the northern terminus is Canada. Through all this region this road does everything it possibly can to advance the interests of the several communities along its lines. Mr. Shoemaker has prepared a series of booklets to this end, which he issues and sends to all prospects. One of the very best which lies before the writer is entitled, "The Road for Industries." In it he has compiled every city and town on the Delaware & Hudson, and given a comprehensive resume of its existing industries. In addition the book contains a list of all the commercial organizations on the line of the road with their secretaries, a list of the water-powers undeveloped and partially developed, and facts of interest about the anthracite coal, dairying, agriculture, paper manufacture and summer resort business of that section. If the New York Central, New York, New Haven & Hartford and the Boston & Maine railroads would produce publicity of the same type, New England could be made to blossom as the rose. The commercial executives of the country are going to work much closer with the railroads in the development of their individual towns than they have in the past, and the railroads themselves are coming to realize the absolute necessity for such co-operation. The western railroads have for years appropriated large sums of money for publicity in order to boom the towns along their lines.

George T. Badders, secretary of the Topeka, Kan., Commercial Club, told how the people of that city had eliminated "hold-up" advertising. Nothing that he has accomplished excels the very excellent results attained by the Merchants' Association of Worcester. Both cities are saving their business men thousands of dollars annually in this one direction. The proposition to eliminate from every community all forms of fake advertising ought to be fostered by commercial organizations generally, and will be the more its evils are understood. It benefits nobody but the solicitor, and is indefensible as profitable publicity.

The extreme South was represented by M. B. Trezevant of New Orleans, secretary of the New Orleans Progressive Union, and the extreme West by A. B. Sommers of Tacoma, Wash., while the extreme East was represented by the Secretary of the Board of Trade in this city.

The banquet which brought the session to a close had as its principal speaker Hon. John

R. W. BROWN
Secretary-Treasurer National Association of Commercial Executives

Barrett of Washington, D. C., head of the Pan-American Bureau of Republics. Mr. Barrett has arranged for a conference in Washington this winter of the representatives of all the great Latin-American countries with the representatives of the commercial life of the United States, and the session promises to be the most important and far-reaching gathering ever held in the United States. The express purpose of this conference is to develop the trade relations of this country with the 70,000,000 to the south of us, whose foreign trade now exceeds three billion dollars.

The next convention will be held at Louisville, Ky., in the summer of 1911. Among the striking figures of the convention this year was Mr. R. W. Brown of that city, and when he invited the delegates to come to the Blue Grass country next year, they accepted with enthusiasm. There was great rivalry for the convention. The Tacoma man was loaded down with letters and telegrams from commercial organizations and distinguished men on the slope urging the secretaries to go to Tacoma, while E. H. Hyman of Macon, Ga., had cotton-bolls, sugar-cane, picture-cards and literature galore advocating his town. Newburgh, N.Y., Memphis, Tenn., the Bluff Point Hotel at Lake Champlain, and other attractive points all had to go away back and sit down when the man from Louisville got started.

One of the most enjoyable features of the gathering was the presentation in the closing of the session of a magnificent loving-cup to Mr. Cotton by the delegates, in recognition of his sterling services as Secretary. He was further honored by elevation to the Presidency of the body. R. W. Brown of Louisville was made Secretary-Treasurer, and the Secretary of the Worcester Board of Trade was made a director of the organization for three years.

The total number of delegates in attendance was 70, representing 49 cities with an aggregate population of 11,785,696. In these 49 bodies are 37,633 persons. There are now 115 cities enrolled in the Association. An excellent group photograph showing the delegates in attendance is a feature of this article.

Proposed Merger in New Haven

It is expected that the joint committee of the Chamber of Commerce and the New Haven Business Men's Association will be ready to make its report on the proposition to merge the associations some time next week. The Chamber of Commerce has about 1,200 members and the Business Men's Association has 350, making a total membership of the amalgamated societies of about 1,550. If the merger goes through, as it is expected it may, the larger association may require bigger quarters than afforded in the chamber's headquarters in Chapel Street. With new quarters, there are likely to be some additional appointments not embraced in the present Chamber of Commerce premises.

F. J. Linsley of the joint committee, when asked recently about the prospects of a unification of the two societies, said they were trying to work out a plan to unite. He said he could see advantages of a union of the two organizations in carrying on the work for the city in which they were engaged.—New Haven (Ct.) Union.

Getting New Industries

The Michigan Tradesman Says that the First Step is to Make Your Town "Worth While"

In an article relating to the issuance of bonds by Grand Rapids for the purchase of park lands, the Michigan Tradesman says:

Boards of trade, chambers of commerce and similar organizations now have salaried executives and often the salaries are high. These executives are men who have made special study of how to make towns grow industrially, commercially and in population—how to secure new industries, how to bring excursions, how to extend trade, how to advertise the municipality and attract visitors and new citizens. They are experts in their line.

About sixty of these commercial executives were here to attend the recent National Convention, and among them were some of the brightest city promotion talent in the country. They talked for two days on various phases of their work, and a crystallized report of the proceedings would read about as follows:

How to secure conventions—make your town worth while.

How to bring in excursions—make your town worth while.

How to secure new industries—make your town worth while.

How best to advertise your city—have good things the world will talk about.

In the discussion there was a wonderful unanimity in defining "worth while" in connection with a town. All agreed that it meant good health, good streets, good schools and churches and good government, and not one but also included parks, playgrounds and civic beauty. A city may have all the other good things, but if it lacks beauty spots and breathing places—will such a place appeal to the man of family in search of a home?

Some very concrete illustrations of the influence of civic beauty on city growth were given. Kalamazoo tried bonuses, free sites, stock subscriptions and other methods to attract new industries, and tried in vain. Two years ago the efforts were directed to making the city more attractive, to make it worth while, and since then eighteen new industries have been added to Kalamazoo's list. Memphis, Tenn., had longings to become a great city, but these longings were in vain until about ten years ago. Then the people voted $250,000 for park purposes and about 800 acres were added to the city's park area. Today Memphis is one of the important industrial centres of the South, with a growth in population and importance in the last ten years that has been phenomenal.

Grand Rapids wants more industries, more excursions and conventions, more population and a greater importance in the world. Why does not Grand Rapids do as Kalamazoo and Memphis and other cities have done and as the commercial executives advised—why does not Grand Rapids first make itself worth while? It is an investment, not an expenditure, that is being urged, and an investment in which the city can not possibly lose.

The New England Corn Exposition

The Culmination of Two Years' Work by a Relatively Small Group of New England Men, Who have Given Whole-heartedly of Time, Money and Labor to Advance New England Agriculture

THE beginning of the New England Corn Exposition, Inc., was March 4, 1909, at a meeting of the New England Conference on Rural Progress, attended by N. Howard Brewer of Hockanum, Ct., who proposed this Exposition.

Having been vitally interested in the success of the expositions in the West, and having exhibited at several of them, and being a successful corn raiser as well as prize winner, Mr. Brewer thought something of the same sort ought to be held in New England. Speaking of the growth of the plan Secretary W. D. Hurd of the Exposition said:

"This thought began to crystallize, and at several informal gatherings it was believed that the time was ripe to proceed. Ways and means were discussed, the fruit interests of New England were pretty well organized on a fruit show, and it was decided to hold such in 1909, believing that by booming separate interests first, the larger plan would easily follow. Those interested in corn and general agriculture did everything in their power to help the fruit show along, and it was decided to follow this with a big Corn Exposition in 1910. The New England Fruit Show was a huge success.

"At an informal gathering in October, 1909, the necessary committees were appointed to formulate plans for the Corn Exposition. At a meeting held in January, 1910, formal organization was perfected. At this meeting in Boston representatives were present from every New England college, experimental station, boards of agriculture, men high up in the four great railroad systems, and prominent representatives of great New England industries allied to agriculture. Everybody was enthusiastic, and pledged hearty support. The result was the organization of the New England Corn Exposition and the determination to make this the greatest thing of its kind ever held east of the Mississippi River.

N. Howard Brewer
President

"Proposals were entertained from several cities to have the Corn Exposition held there, but Worcester offering the best inducements, it was decided to hold the Corn Exposition in this city November 7 to 12, 1910.

"The central idea and ideal of the Exposition is 'The Betterment of New England Agriculture.' There is no commercialism attached to the project. All the officers have served without pay, and have even paid their own traveling expenses.

"The results to New England agriculture are yet to be seen. It is safe to predict, however, that no other movement yet started will mean so much as this Exposition.

"The great statesman, James G. Blaine, once said: 'Corn will yet be the spinal column of the nation's prosperity.'

"Certainly this Exposition will prove anew to New England and to the whole country that the 'land of opportunity' agriculturally, is here as well as in the far West.

"The Corn Exposition for some weeks has been an assured success.

"After this why not a big New England dairy show—then why not have fruit, corn, dairy, poultry, market garden and forestry interests all combine for one grand general New England Agricultural Exposition?"

The story of the struggle to bring to a successful issue a corn show without amusement features; a corn show that would be educational because of addresses by masters of agricultural science; a corn show that would be inspiring by reason of the achievements of hundreds of New England farmers, whose belief that New England can compete successfully with any portion of our great country would be justified by the evidence of their exhibits—is to tell of consistent and persistent work on the part of an unselfish and far-seeing group of men.

The "Heart of the Commonwealth," the many-sided city of Worcester, wanted this Exposition and through the energetic efforts of its Board of Trade got it. Known the world over for its industries and their three hundred thousand varied products, Worcester has another side not so widely known. It is the county seat and trade centre of the county of the same name which, according to the last published census, ranked thirteenth in the value of its agricultural products among all the counties of the United States. The city is the home of the largest Grange in the State and is known throughout all America, among dairymen, as the home of the finest herds of Jersey cattle on this continent. Thus it will be seen that Worcester has a vital interest in the betterment of New England farming, for dotting the rolling surface of the county are splendid farms, owned by some of the most progressive farmers in the six northeast states.

The focus of railroads radiating to every point of the compass; with a network of trolley lines reaching into Connecticut, Rhode Island, and southern New Hampshire, and connecting with other lines for yet more distant points; with finely situated fair grounds whose commodious buildings afford almost ideal facilities for an exposition of the magnitude of this one.—Worcester offers a very central and easily-reached meeting place for the gathering together of the people of New England.

The place for the holding of the Exposition selected, the projectors of the enterprise began a campaign for the support of all the interests which would benefit from it. Pledges of support came in from State depart-

ments of agriculture, from State agricultural colleges, from commercial organizations, from granges, from bodies like the Maine Seed Improvement Association, from all the influential organizations which stood for betterment of New England agriculture. The press, too, with the large agricultural papers early in the lead, gave generous publicity to this little understood movement. The railroads co-operated with exhibits of their work along this line with offers of reduced rates and with the dissemination of literature.

GLENN C. SEVEY
Vice-President

With all these forces working toward a common end, the long needed awakening of the farmers of this portion of the country has been well begun by this successful New England Corn Exposition. And in this connection the word "corn" is used as a generic name for all the small grains, cereals, and forage crops that can be grown in the soil and climate of this section.

During this formative period of the Exposition, the general officers, ably seconded by the executive committee and the Worcester local committee, were doing effective work in disposing of the thousand and one details that are part of the running of a big exposition. That these men, all of them men of affairs, took from their needed hours of rest the time they devoted to their unpaid work in connection with the Exposition, and often dipped deeply into their private purses, is an index of the genuine interest they had in the success of this movement. To them, all New England owes a debt of gratitude for their earnest efforts to point a way to success for New England agriculture.

From out of the heart of the corn country of the Central States was summoned a man famous as a corn grower and thoroughly trained in the methods that have made so markedly successful the National Corn Exposition—the Hon. Leonard B. Clore of Franklin, Indiana. Under his guidance and skillful management, the working plans and the problem of financial support were largely solved. The machinery men and the dealers in agricultural supplies rallied at his call, and as the result of his efforts a thoroughly representative exhibit was made of machinery and tools, fertilizers, seeds and allied objects of interest to the farmer. The scheme of the artistic decorations of the buildings and the plan of distribution of the exhibits were originated by him.

If there had been no other displays, the decorations at the entrance gates and on the exterior and interior of the main Exhibition Building (all wrought in ears and stalks of corn) would have formed a beautiful show. Corn which would have carried off the honors at many a Grange fair was freely used in the decorating. With the coming of night the glowing lights spelled out the words, "King Corn," enhancing the artistic effect of the decorations on the front of the main hall. Within, it seemed as though the walls had been literally lined with corn. Here, too, day or night, the magnificence of the decorative work made an immediate appeal to every visitor.

A most unusual feature of the Exposition was the exhibit of the United States Department of Agriculture, which had just been returned from the great exposition at Buenos Ayres, Argentine. It was the first time that the exhibit had ever been shown in this country east of Omaha. Included in this was a display from the Bureau of Plant Industry, which included many interesting features: models of 411 specimen types of apples, 251 models of peach varieties and 159 models of miscellaneous fruits; 234 samples of cereals; a series of samples of clover, alfalfa and grass seeds, enlarged photographs of the seed laboratory of the Department of Agriculture and twenty-six colored drawings illustrating plant diseases; the Bureau of Animal Industry and the Forest Service had many photographs and drawings illustrating their work; and the Bureau of Entomology had three cases of enlarged models of insects.

In one hall of the four used for the Exposition, the exhibits of agricultural colleges made an interesting showing of the work of these centres of scientific effort to better the agriculture of this portion of the country. How much the colleges and experimental stations have done to bring prosperity to New England farmers, no man can estimate. Their exhibits showed how great progress can be made by the tiller of the soil who will use brainwork in addition to the labor of his hands.

The country was scoured from end to end to secure speakers of national repute on agricultural topics, that the real purpose of the Exposition — the education of New England farmers — should be thoroughly carried out. How well the committee in charge of this feature did their work can be seen from the list of addresses (found at the end of this article) arranged for the six days' programme.

WILLIAM D. HURD
Secretary

Prizes aggregating $6,700 were offered and entries poured in from every section of the six states. Considering the fact that this was the first exposition of its kind ever held east of the Mississippi Valley and that there was a vast deal of ignorance concerning the purposes of this type of agricultural show, the interest awakened and the number of competitors for prizes promise much for the near future.

To all who attended, whether directly interested in agriculture or not, the excellence of the exhibits was a revelation. The splendid specimens of the products of New England's farms here shown gave magnificent promise of the place New England agriculture will hold when more of her farmers have been educated to the modern standards of tillage, fertilization and seed selection.

When these lessons are learned by more of our farmers and the greater lesson that tilling New England soil pays big returns is taught to more of our people, then will the census returns once more begin to climb until New England regains her rightful place in agriculture.

With less dependence upon the grain crops of the West, there is bound to be a great increase in poultry and live stock. When that time arrives the great problem of living cost will have been solved for many, and the beginning of a better day for our great industrial classes in New England will be at hand.

J. Lewis Ellsworth
Treasurer

Then, looking back upon the year 1910, the people of this thriving city of Worcester can say with pride that they helped to open the jar of adamant wherein had been sealed for decades the genii of progress whose liberation meant the renaissance of New England.

THE PROGRAMME OF THE WEEK

MONDAY, NOVEMEBR 7.

2.00 p.m. Dedicatory exercises.
2.30 p.m. "The Improvement of Farm Crops." Prof. C. A. Zavitz, Guelph, Ont.
"The Breeding of Grasses." Dr. H. J. Webber, Ithaca, N. Y.
7.30 p.m. "Systems of Farm Management." Prof. W. J. Spillman, Washington, D. C.
"College Extension Work." Prof. Alva Agee, State College, Pa.

TUESDAY, NOVEMBER 8.

10.00 a.m. "Principles of Corn Breeding." Prof. F. W. Taylor, Durham, N. H.
"What Rhode Island is Doing with Corn." Prof. G. E. Adams, Kingston, R. I.
2.00 p.m. "Co-operative Breeders' and Cowtest Associations." Leon S. Merrill, Augusta, Me.
"Ontario's System of Co-operative Experiments in Agriculture and what it is Doing for the Farmer." Prof. C. A. Zavitz, Guelph, Ont.
7.30 p.m. "Corn Growing from A to Z." Prof. C. G. Williams, Columbus, Ohio.
"The Feeding of Corn." Dr. J. L. Hills, Burlington, Vt.

WEDNESDAY, NOVEMBER 9.

Governor's Day.

Afternoon and evening programme under the auspices of the New England Conference on Rural Progress.

OFFICERS.

President, Wm. D. Hurd, Amherst, Mass.
Vice-president, W. D. Gibbs, Durham, N. H.
Secretary-treasurer, H. G. Bell, Orono, Maine.

Executive Committee.

The above officers and Kenyon L. Butterfield, Amherst, Mass.; C. L. Beach, Storrs, Conn.; O. L. Martin, Plainfield, Vermont.

10.00 a.m. "Growing Corn and other Grains in Connecticut." Prof. L. A. Clinton, Storrs, Conn.
2.00 p.m. Brief addresses by the Governors of the New England States.
8.00 p.m. "A Campaign for More and Better Corn." Prof. P. G. Holden, Ames, Iowa.

THURSDAY, NOVEMBER 10.

10.00 a.m. Demonstration of Corn Judging. Prof. P. G. Holden.
2.00 p.m. Programme under the auspices of N. E. Conference on Rural Progress.
General subject: "Co-operation for the Betterment of New England Agriculture and Country Life."
1. By the Boards of Agriculture, Dr. Leon S. Merrill, representing Maine Department of Agriculture.
2. By the Experiment Stations, Dr. J. L. Hills, Director Vermont Station, Burlington.
3. By the Agricultural Colleges, President C. L. Beach, Connecticut Agricultural College, Storrs, Conn.
4. By the Granges, Hon. Charles M. Gardner, Master Massachusetts Grange.
5. By the Churches, Rev. E. T. Root, Secretary Massachusetts and Rhode Island Federation of Churches, Providence, R. I.
6. By the Schools, Hon. H. C. Morrison, Superintendent of Schools, Concord, N. H.
7. By the Chambers of Commerce, Hon. James J. Storrow, Boston.

8.00 p.m. "The Possibilities of New England Agriculture." Dr. W. H. Jordan, Director Experiment Station, Geneva, N. Y.

FRIDAY, NOVEMBER 11.

10.00 a.m. "Growing Small Cereals." Prof. H. G. Bell, Orono, Me.
"What Selection and Breeding have done for Tobacco." H. K. Hayes, New Haven, Conn.
"Fertilizers for Corn." Dr. Wm. P. Brooks, Amherst, Mass.
2.00 p.m. Programme under the auspices of New England Conference on Rural Progress. (Speaker to be announced.)
7.30 p.m. "The Use of Corn Products as Human Food." Miss Anna Barrows, Teachers' College, Columbia University, N. Y. City.
"The Fireless Cooker and its Use in the Home." Miss Helen Louise Johnson of "Good Housekeeping," Springfield, Mass.

SATURDAY, NOVEMBER 12.

9.00 a.m. "Fundamental Foods, Principles of Cookery." Miss Anna Barrows, Teachers' College, N. Y.
10.00 a.m. "Market Poultry, with Demonstrations." Prof. James E. Rice, Ithaca, N. Y.
2.00 p.m. "Heredity in Poultry." (Illustrated.) Dr. C. B. Davenport, Cold Springs Harbor, N. Y.
"Feeding and Care of Poultry." Prof. James E. Rice, Ithaca, N. Y.
7.30 p.m. Auction sale of prize corn.

Burt W. Greenwood
Assistant Treasurer

Editorial Reflections

The New England Corn Exposition

As this Magazine goes to press the first corn show ever held in New England is in active progress on the grounds of the Worcester Agricultural Society in this city.

In the success of this Exposition the Worcester Board of Trade has a vital interest and has played an important part. The money to make it possible was raised by this organization, its rooms have been the headquarters of the Exposition management, and the Secretary of this Board has been the chairman of the resident committee in charge of the details of the enterprise.

It is impossible, of course, at this writing to tell how far reaching will be the results of the Exposition, once it is held. It is purely educational in its scope, and it will take more than one season to show whether the farmers who came here will be advantaged by their visit.

The work of the Worcester Board of Trade in connection with this Exposition is a distinct departure from the work that this organization has been accustomed to do in its 35 years of honorable history. It was work, however, that needed to be done by somebody, and as no other commercial organization in New England seemed to be willing to finance this show the Worcester Board of Trade went ahead and did it. It not only raised the funds necessary to make this show a success, but it brought out of the Golden West the good genius of the show—Mr. Leonard B. Clore of Franklin, Ind., who has since last August acted as the resident manager. The combination of his brains and Worcester money, fused by this Board and by this Board alone, made this Corn Show possible. Whatever success it achieves the members of the organization can justly claim, for without this organization the Corn Show could never have been materialized into the practical and even beautiful display it today affords.

Particularly great is the debt of gratitude that the management owes to Mr. Walter D. Ross of this Board. He has given unstintedly of his time and money, and never during all these months has he been called upon in vain. He was primarily responsible for bringing the Corn Show to Worcester, and having gotten it here he has labored zealously and unceasingly to make the affair a success. Mr. T. C. Bates has always been a progressive and helpful factor, and he, like Mr. Ross, has shown his faith by his works in connection with the beautiful decorations of corn for the main building.

Mr. J. Lewis Ellsworth, our very efficient secretary of agriculture, Chairman of the Committee on Agriculture of this Board, has been the safe and sane Treasurer of the Exposition and his assistant, Mr. Burt W. Greenwood, one of the livest wires in connection with the whole show, is the son of Mr. Charles Greenwood, one of our most valued members.

Lack of space will prevent further enumeration. It only remains to be said that this show has been from the start peculiarly a Worcester enterprise. The merchants and manufacturers of this city gave the money that made the show possible, and gave it freely out of public spirit and without any possible conception of what the show was going to be when held.

The publicity work has all been done from Worcester and has been done most effectively by Charles H. Willoby, with whom it has been largely a labor of love. In his case, as in that of the resident manager, he has rendered $10 worth of service for every $1 worth of remuneration that he has received.

From the Free Soil movement of ante-bellum days to the Corn Show of 1910, every step in human progress that this country has taken has been taken with a Worcester man or a Worcester institution in the van. If the Exposition in this city shall serve to inspire the tillers of the soil, our great fundamental industry, with new enthusiasm in their calling and new faith in the future of our grand old New England, the Worcester Board of Trade and its 850 members will be content.

Water Competition in Danger

In the city of New York last month half a hundred of the most prominent lawyers in this country gathered to discuss the railroad legislation enacted at the last session of the Congress and see if some flaw could not be detected in it whereby in whole or in part it could be declared unconstitutional. The sections to which these eminent gentlemen took exceptions were as follows:

(a) That portion of Section 15 which confers power upon the Interstate Commerce Commission to suspend a rate for a possible period of ten months.

(b) That portion of Section 15 which reserves to the shipper the right to route freight, when taken in connection with the Carmack amendment to Section 20.

(c) Long and short haul and aggregate of intermediate rate clauses as contained in Section 4.

(d) The water route provision contained in Section 4.

(e) The provision of Section 15 with respect to the establishment of through routes and joint classifications and joint rates by the Commission.

(f) The provision of Section 15 imposing the burden of proof upon the carrier as to the reasonableness or justice of increased rates.

The water route provision contained in Section 4 is one to which the railroads take the most violent exception and is per contra the one of which the shippers on the Atlantic seaboard are most violently enamored.

This is particularly true of Worcester because, notwithstanding the fact that it is an inland city, it is vitally interested in the water transportation problem due to its use of raw materials that must move by water between northern and southern points and also on the general principles that the *water rates largely regulate the maximum rail rates between competing points throughout the United States.*

Closely bound up with this proposition is the proposal to secure additional legislation at the next session of Congress whereby an absolute prohibition will be ordered of any less rate for a long haul than a short, thus removing from the Interstate Commerce Commission the discretion which is now vested in it in that particular.

The result of such legislation would be to accomplish what the carriers desire, viz., to nullify the effectiveness

of water competition from the Atlantic to the Pacific as a regulating influence upon the transcontinental rail rate.

The Committee on Railroads and Transportation of this Board, at the solicitation of Mr. Chauncy G. Whiton, treasurer of the New Bedford, Martha's Vineyard & Nantucket Steamboat Company, took this matter up last winter and conducted an extensive correspondence in the direction of securing legislation which should preserve this water competition. It is highly gratifying to know that all the commercial organizations in the East now recognize the gravity of the situation and will undoubtedly unitedly labor not only to prevent the elimination of water competition, but will ask for legislation to compel the railroads to procure an absolute divorce from the ownership, control or operation of competing water routes.

The New York conference will prove highly valuable if it will awaken the Eastern shipper to the necessity of immediate Congressional action to preserve the advantages he now has and to warn him against modifications of the Mann-Elkins amendment to the Interstate Commerce law calculated either to render those amendments nugatory and of no effect, or else so to distort the plain intent of the law that the last estate of the aforesaid shipper shall be worse than the first.

The Situation at Washington Square

There is being expended in Worcester at the present time $3,000,000 to abolish the southern grade crossings. Five hundred thousand dollars more is going into stone and marble and cement to build a new passenger station. The Boston & Maine, the state and the city will put $1,000,000 in addition to this sum into the abolition of the northern crossings. At the conclusion of this gigantic undertaking there will still remain one job unfinished, the conservation of Washington Square.

This square as it stands at present is ample for the business life of today and if its existing lines can be retained it will be ample for the business life of tomorrow. But the fact is that a large section of this square is claimed by the railroads. They assert that they have a clear title to this square to the point where the drinking fountain is now located. In order to prove title they have twice within the recollection of men in middle life fenced off that portion of the land to which they lay claim. It is probable that they will not give up this property without a struggle if it belongs to the city, and if it should fall out that they are in rightful possession the acquisition of the land will be still more expensive.

At the same time the city must take into consideration its further business growth, and plan accordingly. Conditions that were adequate for a city of 100,000 people will not be at all sufficient for a city of 200,000. Worcester is growing at the rate of 3,000 a year. In 1930 we shall have here more than 200,000 people, all of them producers and all of them in the course of a year called to this square for one purpose or another many many times.

Through this square must proceed every twelve months a large proportion of the traffic from the east side to the west side of the city. Is the provision already made adequate for the accommodation of this traffic?

This question is one that requires the broadest possible outlook. The immediate present has its claims upon the taxpayer and should never be ignored, but the claims of the present are not paramount. If a city is to be a place in which capital and labor are both to flourish, it must always discount the future. We cannot know today what the Worcester of 1930 will be, but when we compare the Worcester of 1910 with the Worcester of 1890 we can guess.

The Worcester Board of Trade has taken this matter up in connection with the preservation of the Union Station tower, and the directors have asked the City Government to appropriate sufficient money to hire a landscape architect of notable ability to study the whole situation at that point and see what is best to be done.

In this matter as in every other that vitally concerns Worcester, this Board is not so anxious to find out what is the popular side of the question as it is to find out what is the wise and judicious one. It was vitally concerned in and prominently identified with the movement for the new Union Station. Now that the station is an assured fact and is soon to be thrown open to the public, it will not allow its interest to flag in the subject of surrounding it with proper and adequate and possibly even aesthetic surroundings.

No person who has ever seen the beautiful plaza fronting the imposing station in Providence with its artistic fountain and its great open space flanked by tall and imposing buildings doubts the practical value in actual dollars and cents to a great town of an artistic vestibule.

The Lesson of Grand Rapids

The annual convention of the American Association of Commercial Executives at Grand Rapids, Mich., last month, attended by the officers of 115 of the leading commercial organizations of this country and the Dominion of Canada, was the most important event of the year to the men engaged in the city building on this continent.

The period of "boosting" and "booming" communities through brass band methods is happily drawing to an end. Some western communities still believe that all a town needs to make it grow is to irrigate it with "publicity," but the general consensus of opinion on the part of the ablest men in this work is that more science and less bombast must be brought to the solution of the problems that confront all American municipalities.

More and more every Secretary and every President is coming to realize that teachers who can teach, preachers who can preach, actors who can act, amusement resorts that amuse, merchants carrying stocks complete, attractive and reasonable, streets that are well lighted, well paved and well sewered, street railways that run on time and have good cars, shipping facilities that are ample, passenger trains that are modern, city governments that are honest, public buildings that are beautiful, and houses that can be hired at reasonable figures, are the things that conspire to make a growing city.

Lacking any one or all of these things a city will not only stand still, but fall back, no matter how much printers' ink is sprayed on it.

To secure all of these for every one of their cities was the injunction laid upon the delegates to the Grand Rapids convention again and again and again.

Worcester Quotations

Furnished by Thompson, Towle & Company

Worcester, Mass., October 20, 1910

BANKS.

	Bid.	Asked.
Mechanics National Bank	160	
Merchants National Bank	170	
Worcester National Bank	210	
Worcester Trust Company	325	

RAILROAD STOCKS

Boston & Albany	225	last sale
Boston & Maine common	133	last sale
Boston & Worcester Elec. common		10½
Boston & Worcester Elec. pfd	39	
Fitchburg preferred	128½	last sale
New England Inv. & Sec. pfd	90	92
New York, New Haven & Hartford	154⅝	last sale
Norwich & Worcester	210	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	141½	last sale
Worcester Railways & Investment	75	80

INDUSTRIAL STOCKS.

Crompton & Knowles pfd	150	
Denholm & McKay common	200	
Denholm & McKay pfd	100	103
Graton & Knight Mfg. common	130	140
Graton & Knight Mfg. pfd	110	114
Royal Worcester Corset Co.	140	
United States Envelope common	52	54
United States Envelope pfd	113	114
Worcester Gas Light	285	
Worcester Electric Light	280	290
Wright Wire Company common	102	
Wright Wire Company pfd		110

BONDS.

Amer. Writing Paper 1st 5's	88	last sale
Boston & Worcester St. Ry. 1st 4½'s	95	98
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles deb. 6's	5%	basis
Marlboro & Westboro St. Ry. 1st 5's		90
Norcross Brothers 1st 6's	100	101
United States Envelope 1st 5's	101½	102½
Worcester Cons. St. Ry. 1st 4½'s	94	
Worcester & Marlboro St. Ry. 1st 5's		100
Worcester & Southbridge St. Ry. 1st 4½'s		85

Local October Trade Conditions

Reviewed by O. C. Ansley of the Mercantile Agency of R. G. Dun & Company

Notwithstanding unsatisfactory weather conditions, the distribution of seasonable merchandise in retail lines continues to be of satisfactory volume. Generally speaking, the volume of business among manufacturers is still below productive capacity in many lines.

Building permits were granted during the month to the number of 126, at an estimated cost of $290,465.

Local bank clearings for the month showed a total of $11,066,882, compared with the corresponding month of last year, when they showed $7,913,794.

Six failures occurred during the month in the county, with liabilities of $9,392, and assets of $4,250, compared with eleven for 1909, with liabilities of $475,870 and assets of $423,395, while in 1908 there were eight with liabilities of $113,573 and assets of $45,023; 1907, three, with liabilities of $10,954 and assets of $1,425, and 1906 twelve, with liabilities of $88,074 and assets of $35,973.

Worcester Patents

By Hartley W. Bartlett, Patent Attorney

A. E. Barlow, Wire Netting, No. 971,656.

Poultry netting comprising a series of longitudinal wires twisted together by alternate right and left hand twists to form meshes constituting the body portion of the netting, and having a selvage composed of a multiplicity of wires twisted together successively in opposite directions, corresponding to the twist of the adjacent wires of the fabric.

V. E. Edwards and J. R. George, Feeding Mechanism for Gas Producers, No. 972,172.

A gas producer having a heating chamber provided with an opening in its top for the admission of coal, a non-rotatable coal receiving surface adjustably suspended beneath this opening, a coal agitator above this coal receiving surface for moving the coal off this surface, and a shaft stepped in this coal receiving surface and extending upward therefrom for operating this agitator.

T. H. Nye, Guide for Rolling-mills, No. 972,219.

A rolling mill housing having a guide supporting bar, a guide mounted thereon, the guide and the bar provided with re-entrant engaging surfaces to hold the guide from vertical movement, and a bolt parallel with the longitudinal axis of this guide for holding the surfaces in engagement.

A. G. Brewer, Wire Coat and Hat Hook, No. 972,501.

A coat and hat hook made from a single piece of wire, screw threaded at one end, doubled in the form of an elongated loop with both wires forming this loop in the same horizontal plane and twisted together near the middle of the top to bring the wires into the same vertical plane, thereby forming the hat hook, the lower wire then bent upward approximately at right angles and looped around the upper wire, forming approximately a complete circle, embracing the upper wire, then bent downward, approximately at right angles to the upper wire and bent forward to form the lower or coat hook.

League's New Name

The Houston Business League is no more!

In its place, under the captaincy of the same officers, occupying the same rooms, and with the same secretary ready to take your name, your hand, your money, or anything else you may see fit to extend him, is the Chamber of Commerce of Houston!

The organization has over 1,050 members, all of them the most prominent business and professional men. It also boasts two departments, which many Eastern and Western organizations have, but which are uncommon in the South—the traffic bureau and the press bureau; the first to further the railroad interests of the members, and the second, an up-to-date advertising department for the chamber and for Houston.

The acceptance of the new name by the Board of Directors was unanimous.—Houston (Texas) Post.

Current Events

General

Sept. 22. Fire damages Chase building to amount approximating $150,000.

22. Worcester Lodge of Elks takes possession of new home at Elm and Chestnut streets.

29. Faculty and students of Holy Cross College celebrate passing of 500 mark in enrollment of students.

29. Fifty-third annual Music Festival opens.

29. Census Bureau gives Worcester's population, 145,986.

Oct. 1. Postoffice receipts for September, $35,074.93, show a gain of $2,011.48 over September, 1909, $33,063.45.

1. Entries at Worcester Port of Entry include 790 packages; value, $25,439; duty, $13,242.

1. Worcester Academy dedicates Gaskill Field as new athletic grounds.

2. Annual convention of Massachusetts Optical Society opens.

3. John H. Coes elected President of Mechanics Savings Bank.

5. Conference on the Near East opens at Clark University.

10. Twenty-fifth annual convention of Massachusetts Branch of American Federation of Labor opens at A. O. H. Hall.

12. First observance of Columbus Day.

14. Annual meeting of Massachusetts School Superintendents' Association convenes in City Hall.

17. Charles R. Chase, Assistant Secretary of Y. M. C. A., accepts position of Secretary of Lynn Y. M. C. A.

Industrial

24. J. W. Bishop Company gets contract to build $400,000 mill in New Bedford for Booth Manufacturing Company.

26. Contract given J. W. Bishop Company for erection of $125,000 factory building in Providence, R. I., for Waite Thrasher Company.

26. E. J. Cross Company secures contract for addition to Wyman & Gordon Company plant.

27. E. D. Ward gets contract to build $25,000 factory building at 81 Mechanic Street for John J. Adams.

Oct. 1. Oxford Box & Printing Company removes from Spencer to Worcester.

1. John J. Power awarded contract for schoolhouse in Holden. Plans by George H. Clemence.

1. R. W. Colby & Son secure contract to build picker house for Bowden Felting Mills Company, Millbury.

3. Norcross Bros. Company gets contract for $1,000,000 marble building for Bank of Toronto, Toronto, Canada.

Necrology

25. Herman Lucke, many years in jewelry business, of gastritis, at his home, 49 Fountain Street, aged 67 years and 9 months.

27. Emery D. Ingraham, 31 years leader of Battery B Band, at his home, 24 Dean Street, aged 75 years and 7 months.

A New Study

School Children are Learning Something About Portland

A new course of study is being introduced in some of the city schools.

It is not a science or a language, it is just about Portland. Last summer the Portland Board of Trade got out a booklet about Portland. It contains many interesting facts about this city, and Mr. Braun, of the firm of Porteous, Mitchell & Braun, liked the book and volunteered to have it printed. He ordered 10,000 copies and has been distributing them among the schools. The teachers use them to teach the children something about Portland and the study of this city has become a very popular one.—Portland (Me.) Press.

Birmingham's Growth

The Nashville (Tenn.) Banner Comments Upon the Great Southern Iron Centre and its Relation to Nashville

The large percentage of growth in the population of Birmingham is remarkable, very creditable, and strongly prophetic of the city's great future. Birmingham has those requisites of an industrial centre that built the great English town from which it gets its name and were also conducive to the growth of Pittsburg. Where iron and a fine quality of coking coal exist in juxtaposition, it is inevitable that furnaces, rolling mills and all concomitant industries will be built. These things attract population, and the big industrial town comes from such a condition as a plant comes from the seed in virgin soil.

That Birmingham must be a big town has been liberally prophesied since its foundation in the early seventies. With the boom of the middle eighties its certain and immediate greatness was screamed from the housetop and proclaimed to the uttermost parts of the earth. There was a growth from something over 3,000 population in 1880 to nearly 30,000 in a little past the middle of the decade. But the boom was detrimental. Booms always are. It produced a number of corner-lot financiers and attracted many adventurers of the get-rich-quick class, all of whom were impediments to its solid growth. The financial depression of the latter eighties and early nineties took all the wind out of the inflated prices of real estate, and fortunes were lost faster than they had been made, while there was little advance in solid industry. But the coal was still in the mines and Red Mountain still lifted its long and everlasting range of inexhaustible ore. The bustling, progressive world must have coal and iron, and a great city where these natural conditions existed was still inevitable.

There would have been a great city where Birmingham now is many years ago had the locality been anywhere in the English-speaking world except the South. The old South was occupied with cotton, slaves and politics, and neglected its industrial possibilities. The later South suffered from the turbulence and untoward conditions resulting from sectional strife and social and industrial revolution. It is only now that conditions in the South are becoming normal, and this section is moving on to that great destiny for which nature intended it. With the removal of these impediments, Birmingham, of course, must grow.

Depending solely on its native supplies of red hematite, Birmingham must of necessity be a great industrial centre, and its marvelous growth of the last decade will likely continue in the decade to come. Still, is it seldom that industrial centres are also great commercial centres. Other cities of the South have no more to fear from Birmingham rivalry than Liverpool has to fear from Birmingham and other industrial centres of interior England, or Cleveland, that has by the last census come to be the sixth city in the Union, from Pittsburg. Nashville and Birmingham are essentially different, and there is plenty of room for both of them to develop on the lines of their respective destinies. There is no need for any jealousy or rivalry between the two.

WORCESTER BOARD OF TRADE
EACH FOR ALL ALL FOR EACH
11 FOSTER STREET
WORCESTER MASSACHUSETTS
U.S.A.

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN.

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
MAURICE L. KATZ, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MACGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: ——
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD.

The Month of October

The New England Corn Show, Held Under the Auspices of this Board, Completes its Detailed Work. The Demurrage Matter

The month of October was a quiet one in the Worcester Board of Trade. The Secretary was absent the first fifteen days of the month on his annual vacation and the work of the office was very efficiently carried on by Mr. Willard E. Freeland and the office staff. The rooms of the Board were utilized by the management of the New England Corn Show in arranging for its first annual exhibition, which will be given under the auspices of this Board on the Worcester Agricultural Society grounds at Greendale, November 7-12. The Secretary of this Board has raised $1,350 for this show, and there is every indication as we go to press that it is going to be a great success. While some other commercial organization in New England might have done this work, the fact remains that no other organization in New England did, and had it not been for the Worcester Board of Trade the show would neither have been held here nor been the success it is going to prove. The time had arrived when something had to be done to rehabilitate New England agriculture, and this Board of Trade, representing not an agricultural community, but an industrial community, was the one that went ahead and did it. We believe that the results will justify our efforts. Certainly nothing that has been done in years by this Board has so riveted the attention of New England on this city as has this Corn Show.

Another matter of great interest in which the Worcester Board of Trade has actively co-operated has been the struggle to prevent the reduction in free time for the unloading of freight cars in New England from ninety-six to forty-eight hours. For years New England shippers have had four days in which to unload their freight. Many manufacturers in this section are situated long distances from the railroad and it is impossible for them to load and unload cars in less than four days' time. Both Connecticut and Vermont recognize existing conditions, and have laws prohibiting the reduction of free time in their respective states. In spite of all this, the New York, New Haven & Hartford Railroad promulgated a rule reducing the free time on its line to forty-eight hours, to be effective October 1. The other New England railroads followed suit.

Immediately this Board took cognizance of the matter and sent out over two hundred letters to our leading shippers, requesting them to protest to the Interstate Commerce Commission against any such radical change. A copy of this letter follows:

Dear Sir:—

Under the leadership of the New York, New Haven & Hartford Railroad, the Boston & Albany and the Boston & Maine are attempting to put into effect in this territory, beginning October 1, a new demurrage tariff, reducing the free time for the unloading of cars from ninety-six to forty-eight hours. This Board as an official body has been protesting against this action of the railroads for a year, and we have protested as an organization to the Interstate Commerce Commission through Mr. D. O. Ives of the Boston Chamber of Commerce. Mr. Ives now suggests that the individual shippers write the Commission direct, protesting against any change in the existing demurrage tariff, which allows you ninety-six hours to unload your freight. I wish, if this plan appeals to you, that you would write the Interstate Commerce Commission at Washington, D. C., protesting against the proposed reduction of free time.

Two mass meetings have been held in the rooms of the Boston Chamber of Commerce since this matter first came up and not one voice was raised at either of these meetings in favor of the proposed change. Shippers of wool, cotton, grain, flour, coal, hay, lumber, paper and machinery have all been represented at these meetings, and have individually and collectively made most vigorous protest against the change. At the second mass meeting a special committee was formed, consisting of prominent shippers from each state in New England and extra members from western Massachusetts, the Retail Coal Dealers' Association of New England, and the Transportation Committee of the Boston Chamber of Commerce. This committee has had two meetings with the railroad representatives, at which the position of the shippers of New England in opposition to the proposed forty-eight hour rule was clearly stated.

On August 9th, having been advised that the New York, New Haven & Hartford Railroad proposed to establish the new rule on October 1st, this special committee addressed the Vice-President of the New York, New Haven & Hartford Railroad, asking that road for a meeting to consider the matter in question and requesting that the issuance of any proposed tariff be deferred until this meeting was held. August 30th was set as the date for this conference, but before it could be held, namely, August 23rd, the New York, New Haven & Hartford Railroad did actually announce the promulgation of a new tariff, reducing the free time to forty-eight hours.

It will therefore be seen that in spite of the protests of

the shippers of New England, and in spite of the fact that there are laws in both Connecticut and Vermont protecting the shippers of those two states against any such change, the railroads of this section have arbitrarily taken steps to reduce the time of unloading cars from ninety-six to forty-eight hours.

It is claimed that the forty-eight hour rule is in universal use in this country, but such is not the case. The rules have not been adopted by the railroads operated in Texas, nor in part of the intermountain country. Furthermore, while but two days' free time has been allowed in other sections, four days' free time has been allowed for many years in New England, thus admitting some cause for difference in this section.

Figures produced by the railroads, in justification of their proposed reduction in free time in New England, show that the average detention of cars in this section is only a small fraction of a day greater under the four-day rule than it is in other states under the two-day rule. The serious delays complained of on the roads and at terminals and local stations are caused, we claim, by the failure of the railway companies to haul and place cars properly and promptly. Chairman W. Perley Hall, of the Massachusetts Railroad Commission, is opposed to the proposed reduction and has voted against the innovation.

It is the opinion of the committee in charge of this matter that seventy-two hours is the shortest time that should be imposed upon the shippers in this section, and we believe that every effort should be put forth by our shippers to keep the existing rule in force, and if a reduction is to be made, that seventy-two hours be the period fixed upon. If you will write the Interstate Commerce Commission, protesting in your own behalf against the reduction to forty-eight hours, I believe you will strengthen the case for the shippers in this section and will make it evident to the railroads that New England, as a whole, is united in its opposition to the radical reduction proposed.

Yours very truly,
HERBERT N. DAVISON,
Secretary.

Our largest shippers at once took this matter up with the Commission, and so general was the protest here and elsewhere that it was decided to hold a public hearing in Boston, at which the Commission could obtain the facts at first hand. Nearly a thousand men gathered in Boston on October 17 from all over New England, and for two days witness after witness appeared in opposition to the change.

Subsequently, viz., on October 31, the commissioners, after a hearing in Washington, attended by Mr. Ives and the representatives of the railroads, announced that they would allow shippers of grain and grain products, coal and lumber, seventy-two hours in which to do their unloading, but would enforce the forty-eight hour rule against all others. As to the three classes in question, a demurrage bureau is to be created in Boston which will have them under observation for six months, and will then report to the Commission its findings as to the necessity of treating them any differently from other shippers.

It can be asserted without fear of contradiction that the reduction proposed by the Commission is exceedingly unpopular, and it is certain that if any method can be devised whereby this question can be taken to the courts it will be done. Both Vermont and Connecticut appear to be in position to test the legality of this ruling, having laws on their statute books prohibiting reduction in free time by the railroads, and it would not be at all strange if one or the other or both of them did so. The prorogation of the Massachusetts Legislature alone prevented the introduction of a bill of similar tenor in this State.

Necessity of Water Competition

If Transcontinental Rates are to be Kept Down, Atlantic and Pacific Slopes Must Co-operate to Protect Ocean Freight Carriage

One of the principal things that the Worcester Board of Trade in connection with other eastern commercial organizations has been attempting to do for several months has been to retain the freight rates to the Pacific slope at a figure which would allow eastern shippers to compete on an equitable basis with the manufacturers of the middle West.

As this matter has stood before the Interstate Commerce Commission, it has been known as the Spokane Rate Case. At a meeting in New York at the rooms of the Merchants' Association, Tuesday, October 25th, there were present a quorum of the traffic executive committees of the eastern commercial organizations and Honorable Nathan Bijur, counsel for these organizations in this case. There were also present Hon. Seth Mann and Mr. Fred Michaels of San Francisco, and Mr. Mann was invited to address the meeting. He stated in effect that the rate situation, as foreshadowed in the Spokane case, clearly shows that the shippers on the Atlantic Coast must reach the intermountain territory, if at all, by way of the ocean carriers to Pacific Coast cities and by way of the eastbound distributive rates to this intermountain territory out of the Pacific Coast cities; or, what is the same thing, must reach these coast cities by the rail terminal routes at rates based upon active and effective ocean competition. It accordingly follows that the Atlantic Coast cities are vitally interested in three propositions:

First: That the ocean-carrying business, in competition with the transatlantic railway lines, should be made as effective, efficient and stable as possible.

Second: That the distributive rates from the Pacific Coast cities into the intermountain territory should be made upon as low a basis of rates as the rule of reasonableness will permit, and that the Interstate Commerce Commission should not exercise a different measure of reasonableness of rates from Pacific Coast cities eastbound than from the middle West cities westbound to the same territory.

Third: That the manufacturing, distributing and commercial interests of the Atlantic and Pacific seaboards are mutually interested in demonstrating to their representatives in Congress the need of all proper legislation in protection of ocean freight carriage between the two coasts and in protection of the distributive rates from Pacific Coast points into the intermountain territory.

Relating to the first proposition, Mr. Mann recommended that the mercantile communities of the eastern seaboard, as well as those of the western seaboard, lend all possible assistance to the water transportation lines between the coasts by shipping their goods via that

route whenever practicable. In this connection he called attention to the recent establishment of a line by Messrs. Bates & Chesebrough, entirely independent of any railroad interests, and he particularly commended the use of this line to shippers as a step in building up an effective and efficient water transportation between the coasts.

In connection with the second point, Mr. Mann stated that in the near future there would be either a rehearing in the three cases now before the Interstate Commerce Commission, involving the eastbound distributive rate from Pacific Coast cities, or, more probably, a new case presented to the Commission which would involve the question of reasonableness of the eastbound distributive rates from Pacific Coast points to intermountain territory. He further called attention to the fact that in the cases involving this subject thus far passed upon by the Commission, a measure of reasonableness, much more liberal to the carriers and more stringent to the shippers, had been applied to the eastern distributive rates from Pacific Coast points into the intermountain territory than applied by the Commission to the westbound rates from middle Western cities to the same points in intermountain territory.

Referring to the third point, Mr. Mann expressed the opinion that in the near future legislative action would probably be proposed whereby an absolute prohibition of any rate for a longer haul less than charged for a shorter haul would be made, thus removing from the Interstate Commerce Commission the discretion which is now vested in it under the law as amended at the last session of Congress. The result of the operation of such an absolute prohibition would be to nullify the effectiveness of water competition from the Atlantic to the Pacific Coast as a regulating influence upon the transcontinental rail rate. Furthermore, Mr. Mann expressed the opinion that in order effectively to promote the freedom of water transportation between the Atlantic and Pacific coasts, legislation should be had to compel the complete divorcement of railroad lines from the ownership control or operation of competing water routes. He further suggested that the manufacturing, distributive and commercial interests of both the Atlantic and Pacific coasts, which territories form one commercial community in interest in this matter, make known their demands to their representatives in Congress, to the end that the senators and congressmen from the Pacific and Atlantic coast states stand together for the protection of the commercial interests of their constituents in relation to these matters. It was so voted.

America in the Far East

Editorial Comment of the Spokane Inland Herald Upon the Recent Visit of Pacific Coast Business Men to China

The visit of the party representing the Associated Chambers of Commerce of the Pacific Coast will surely have some fruition in the better understanding of the conditions of trade in China and in Japan, and what should be done by this country if it would take, in a few years' time, full advantage of the opening of the Panama Canal. American aims in China are not thoroughly understood of the Chinese, although it is taken for granted that the United States has no designs upon Chinese territory. This country, therefore, starts with a strong advantage in the competition for lending money for the exploitation of Chinese resources and, directly, the building up of an international trade. Nevertheless, the unfortunate issue of the Chinchou-Aigun Railway incident, in which American capital withdrew from the project, has led to the accusation that this country is being governed in its relations with China by the "high financial interests." These "high financial interests" seem to be somewhat a bugbear in the Far East, as they are among certain sections in this country. The Yankee has always been noted as being keen in driving a bargain, but possibly the Chinaman is every whit his match, and as long as the game is played according to the rules, neither Chinaman nor American is likely to object if the other fellow gets the best of the bargain.

But the real danger would seem to be a conflict between American and Japanese interests. America would like to open up China. It would be a very great advantage to the trade of this country. Japan has exactly the same ambition, only more intensely so. Japan is only a few hundred miles from the coast of China, behind which is the largest market in the world. If Japan cannot obtain the Chinese market, its trade expansion is not likely to amount to much. But the United States is thousands of miles away to Japan's hundreds. It has a great market within its own borders. It has others to the north and to the south and across the Atlantic, with which Japan can hardly interfere. Japan particularly desires to exploit Manchuria, and unfortunately it is here that friction develops between it and this country, for the "high financial interests" referred to seem to have centered themselves upon that very province.

One of the certain results of the visit of the representatives of the Associated Chambers of Commerce of the Pacific Coast to China will be to impress upon the members of the party the numberless opportunities that obtain in other parts of China which are closely populated, which have a larger trade and which present a better market than the semi-arid, sparsely populated Province of Manchuria.

From the Field

The Chamber of Commerce of Erie (Pa.) is to have a publicity bureau.

A new state organization is the Associated Boards of Trade of Maryland.

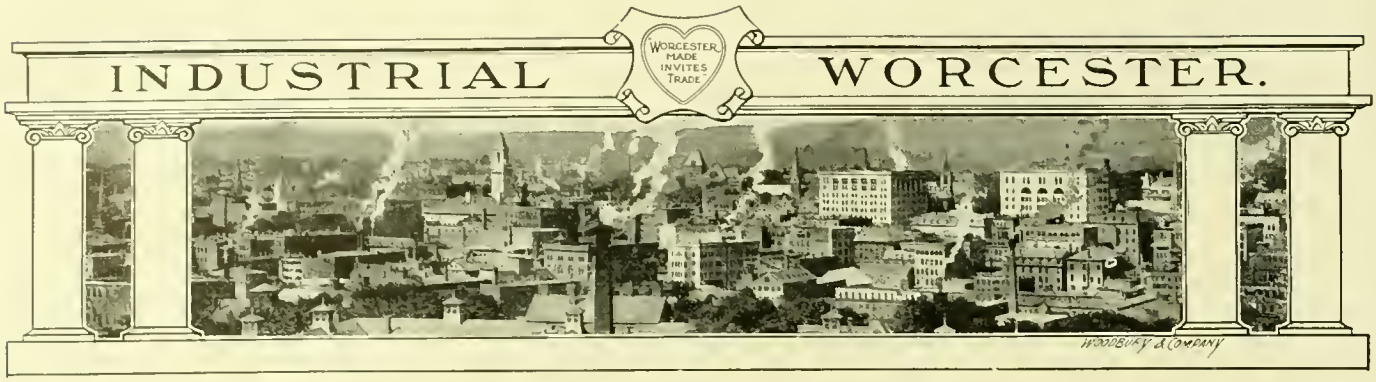
The Salem (Mass.) Board of Trade is taking active steps to secure a paid secretary.

The Minneapolis Chamber of Commerce is raising a fund of $13,750 for the support of the Minneapolis Traffic Association.

The Hartford (Conn.) Board of Trade is co-operating with West Hartford to secure a projected woman's college for the latter place.

The Kansas City (Mo.) Commercial Club has organized a convention-publicity bureau, of which Justin A. Runyan, industrial commissioner, will be the head.

The Brattleboro (Vt.) Board of Trade has raised $120,000 of Brattleboro money to make up the capital stock of $450,000 for the establishment of large cotton-mills.



The Spirit of Co-operation and Enthusiasm

One thing of which this great industrial city is justly proud—an element to which may be attributed much of the excellence of its products—is its freedom from industrial strife. Go where you will among its many large industrial plants and everywhere you will find the spirit of co-operation—the spirit of enthusiasm—the spirit of mutual helpfulness. Superintendent and mechanic, foreman and apprentice, bookkeeper, salesman and office boy, all are imbued with one idea: to give each of the best that is in them, that the work of their brain and hand may be of that high standard that shall win the encomiums of Worcester's widespread market, confined only by the bounds of civilization.

These thoughts found their germination in the perusal of the beautiful anniversary number of "Grits and Grinds," commemorating the twenty-fifth birthday of the Norton Company and the tenth of the Norton Grinding Company. "Grits and Grinds," published monthly, is the regular house organ of these two companies.

This edition was published for the benefit of the community of 1,200 workers employed by these two companies, and is not intended for general distribution. It is one more step in the direction of the established policy of the Norton Company—a policy which keeps every employee thoroughly in touch with the conduct of the business and the aims and achievements of the great industry that they have helped to build.

This anniversary edition is a beautiful booklet, finely printed and splendidly illustrated, as the halftone cuts used herewith bear witness. With a single exception the halftones are the product of a Worcester concern—the Carlton Engraving Company, and the printing is likewise a Worcester product—from the Commonwealth Press.

It gives a complete list of the employees in the various departments, followed by a historical sketch of the company and a list which shows, year by year, the expansion of the company's plant and business. Three very interesting pictures are three groups of workmen: the first, three men who have been with the company from its inception; the second, thirty-three who have passed the twenty-year mark; the third, a large group who have been employed from ten to twenty years.

Office groups, salesmen, foremen, directors, branch managers, all are seen in its pages, and the effort expended to compile the facts here gathered and to portray the activities of the company, as well as the men responsible for its success, will be repaid again and again by the increased interest and closer union of the hundreds of employees.

Four hundred of these employees are members of the Norton Company Mutual Benefit Association. This association was organized February 26, 1892, with a membership of seventy-four. During the eighteen years of its existence it has paid out nearly $10,000 in sick and death benefits. Sick benefits alone have amounted to $7,589. The prime object of the association is the protection to families in case of illness and death, although the social events conducted by the members, which have been a big success, have contributed much to the pleasure of all concerned. The cost in dues is 40 cents monthly, or $4.80 a year. Six dollars weekly is paid for sick benefits for a period not exceeding ten weeks; one hundred dollars death benefit, and fifty dollars on occasion of the death of a member's wife. The initiation fees range from $2.00 to $5.00, depending on the age of the applicant. The age limits are sixteen and fifty years.

Loading a Kiln

Firing a Kiln

BOARD OF DIRECTORS—1910—NORTON COMPANY

GEORGE I. ALDEN, Treasurer
GEORGE N. JEPPSON, Asst. Superintendent
MILTON P. HIGGINS, President
JOHN JEPPSON, Superintendent
CHARLES L. ALLEN, Secy. and Gen. Mgr.
ALDUS C. HIGGINS, Mgr. Abrasive Plants

A glance at the illustration "Social Features" gives an insight into Norton methods. The interest of the Norton Company in its employees does not consist in merely furnishing the means for obtaining a livelihood. A few of the many ways in which the "Norton spirit" is cultivated are shown by composite picture. Tennis as a noon-hour recreation is one of the many ways by which the afternoon hours are made more profitable to both the business and the worker. A trip through the Norton plant at any hour shows little of that listlessness which so often marks the factory where from the time the power starts until it stops, there is nothing to bring about a restful change in the often monotonous grind of daily toil.

For those who prefer a less athletic recreation than the out door sports provide, the company maintains a reading room. This is in connection with a well-equipped lunch room—one of the most popular parts of the whole system of welfare work.

Another dining room is provided for the staff of office employees. Here sociability reigns and the room is frequently the scene of entertainments for visitors. At least once a year all the executives, the foremen and salesmen are called together and given a banquet at some hotel or restaurant. By these frequent informal gatherings the "Norton spirit" is fostered and the friendships there formed have a great influence in developing the pull-together spirit which in the short period of twenty-five years has developed the Norton Company from the small factory shown herewith to the huge plant covering acres of ground in Worcester, with branches producing raw material at Niagara Falls, N. Y., and Chippawa, Canada, and a European factory—Deutsche Norton Gesellschaft — at Wesseling, near Cologne, Germany.

A baseball club is a summer time feature, strongly supported by the Norton Company and its employees. This is another of the ways by which is aroused a community of interest among Norton employees in all that bears the name Norton.

This creditable publication is the work of the publicity department of the Norton Company, of which A. B. Fritts is the head. Through his efforts "Grits and Grinds" has reached a standard where it is frequently used as an auxiliary textbook in technical schools.

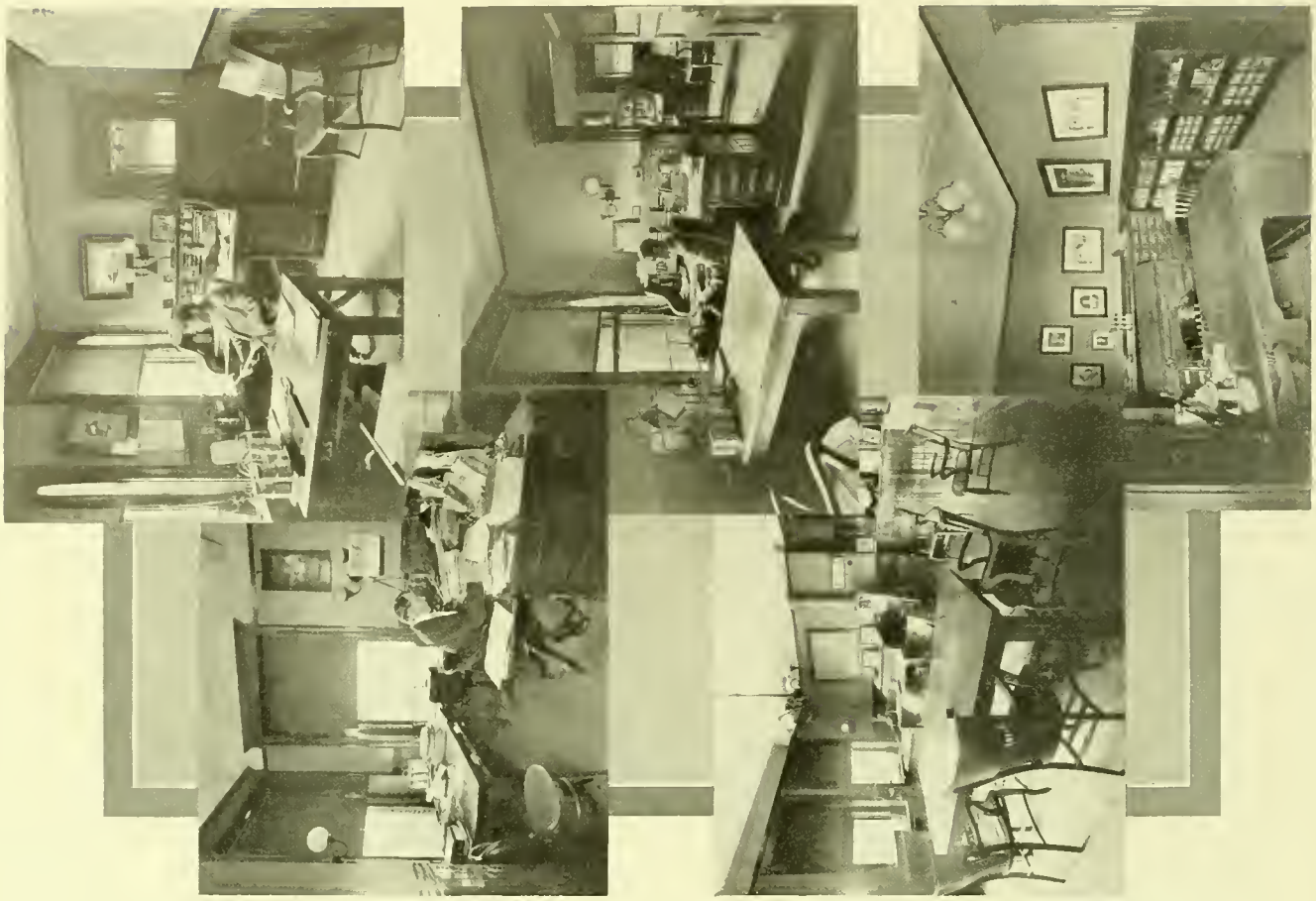
What has been said concerning the Norton Company can be said with equal truth about many other Worcester firms. It is the spirit of the city.

CHAS. H. NORTON
Director and Consulting Engineer Norton Grinding Company

New Shaper

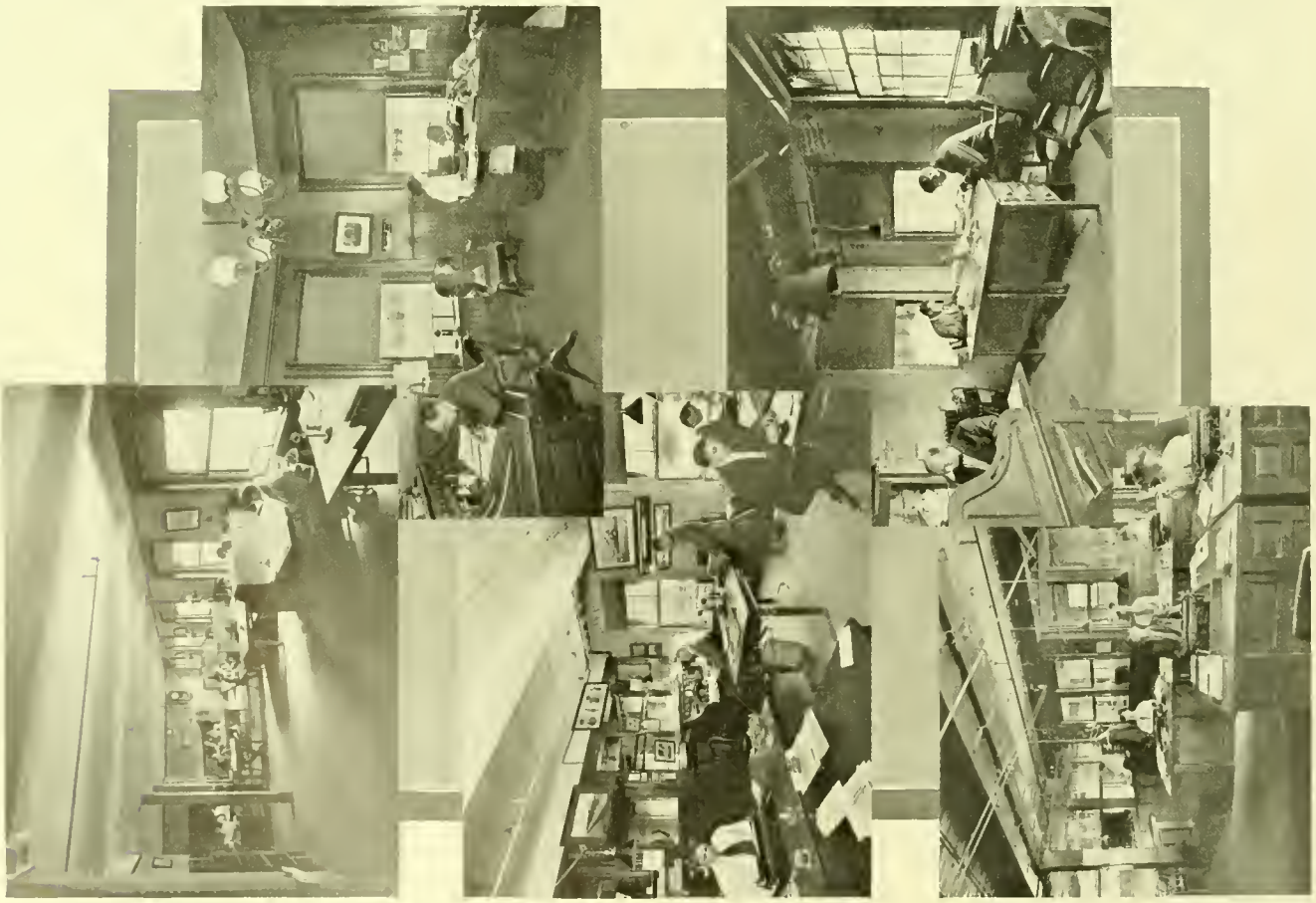
The Stockbridge Machine Company, 68 Albany Street, has brought out a new shaper which embodies several features new to shaper practice, that are designed to add materially to its productive capacity, strength and ease of operation.

This 16-inch, back geared, two-piece crank shaper is a heavy, rigid



E. W. Dodge, Sales Manager
Wm. L. Neilson, Assistant Sales Manager
Office of Aldus C. Higgins, Mgr. Abrasive Plants

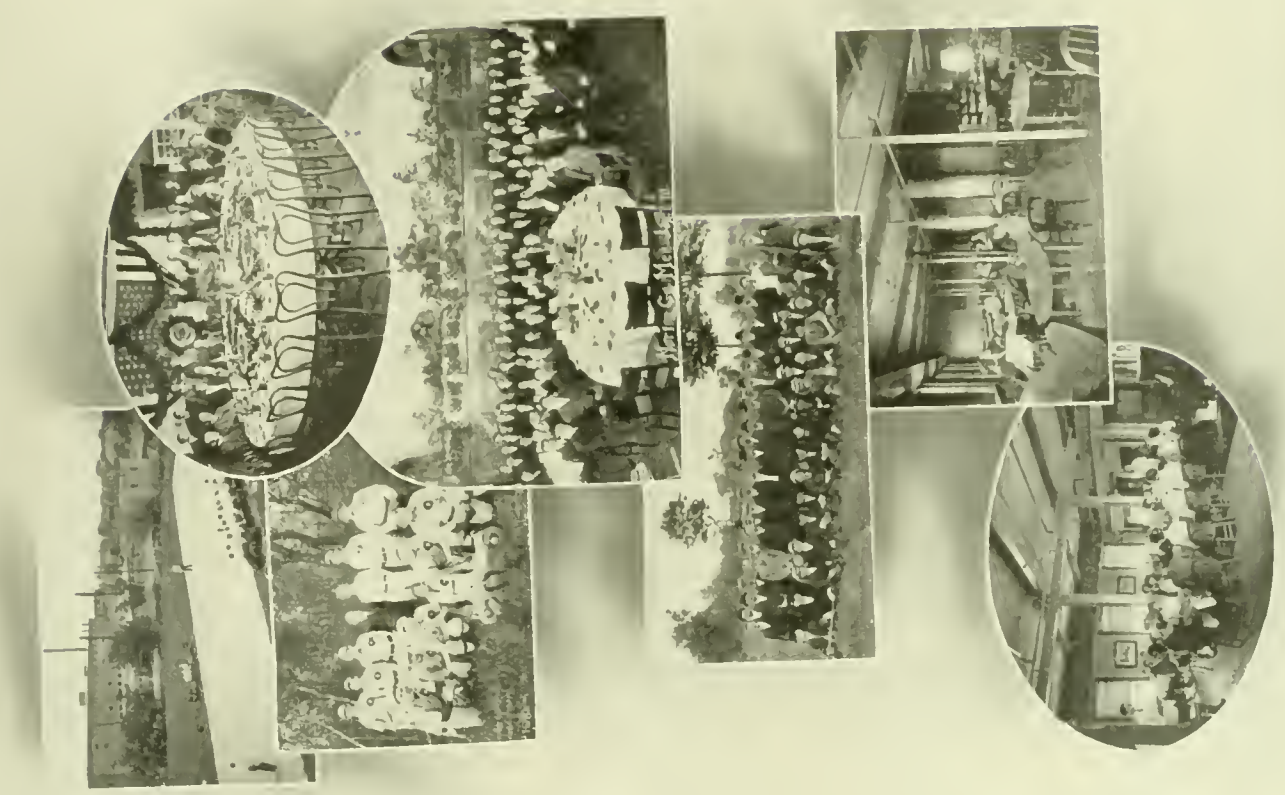
Henry Duckworth, Head of Purchasing and Accounting Departments
Directors' Room



Publicity Department
Office of Order Department

Cost Department and Part of Sales Department
Transportation Department
View in Order Department

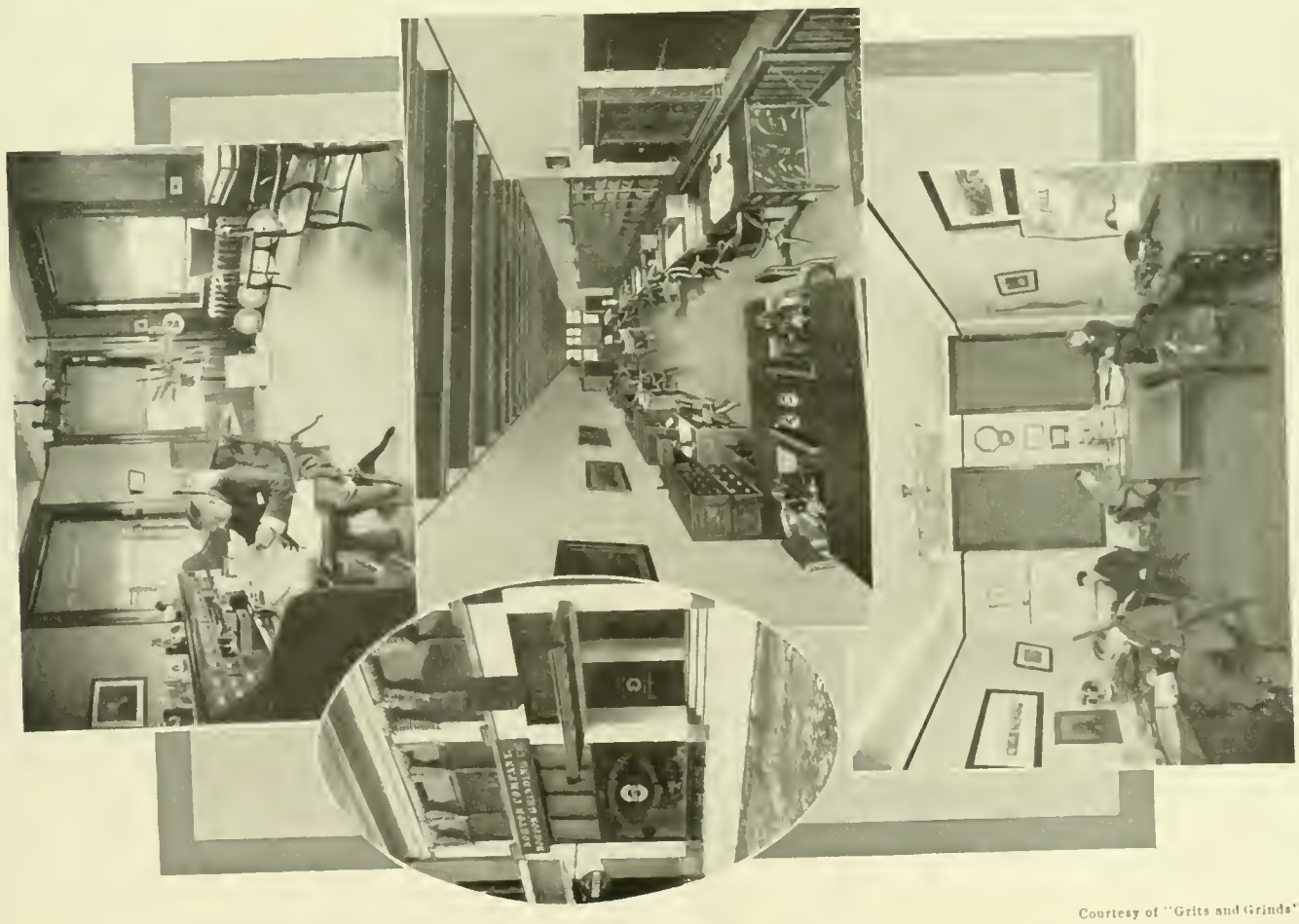
Courtesy of "Grits and Grinds"



SOCIAL FEATURES

Recreation During Noon Hour
Norton Baseball Team
Foremen on Outing
Office Dining Room

Entertaining Visitors
Banquet to Norton Salesmen and Foremen
Workmen's Lunch and Reading Room



Office of General Manager, Worcester
Chicago Office and Store, 11 North Jefferson Street
Exterior and Interior Views
New York Office, Hudson Terminal Building, 50 Church Street

Courtesy of "Grits and Grinds"

F. B. Norton and First Norton Emery Wheel Works

machine, weighing, complete, 2,850 pounds. The claims of the makers are contained in the following statements:

The method of attaching the cross-rail to column, while new to shaper practice, has long been employed in milling-machine design. With this construction one gib is cast solid with the cross-rail, which, it is stated, adds to the stiffness and prevents any possibility of the rail tipping away from the column when the adjusting gib, which is on the working side of shaper, is loosened. By this method of construction, the operator is enabled to make all adjustments from one side of machine.

The rocker-arm is of special design, with the slot of unusual depth and width to provide ample surface for crank-block. The slide ribs are cored U-shape.

It is claimed that the ram, whose sides are built straight down, which is internally ribbed, and is carried on a semi-circle on the top, possesses great strength and rigidity. Tapered packings, running the entire length of column and adjusted from either end by screws, take up the wear in the ram-ways.

The makers claim new features for the feed also. The cross-feed is automatic in either direction, and adjustment can be made while the machine is in motion. The construction is such that there is no necessity of changing the position of the cross-feed rod when it is desired to change the direction of the cross-feed.

The reversing is done by moving to one side or the other of the centre the block in the slide, which has a reciprocating motion.

The bar-screw is fitted with a graduated collar reading to .001 of an inch. The head-slide has a graduated collar reading to .001 of an inch, which can always be set from zero without regard to position of screw. Down feed to head, either automatic or hand, can be provided.

The base extends well out in front, and has slots for strapping work to it. An angle-iron is provided which bolts to the base and carries a sliding upright that adjusts itself automatically to the various heights of the knee. Setting up two bolts locks the slide in position; in conjunction with this construction, the knee is hooked over the saddle, the saddle taking the forward thrust which would otherwise come on the bolts that bolt the knee to the saddle. The knee is moved vertically by means of beveled gears and a telescopic screw. The latter has a ball-thrust bearing.

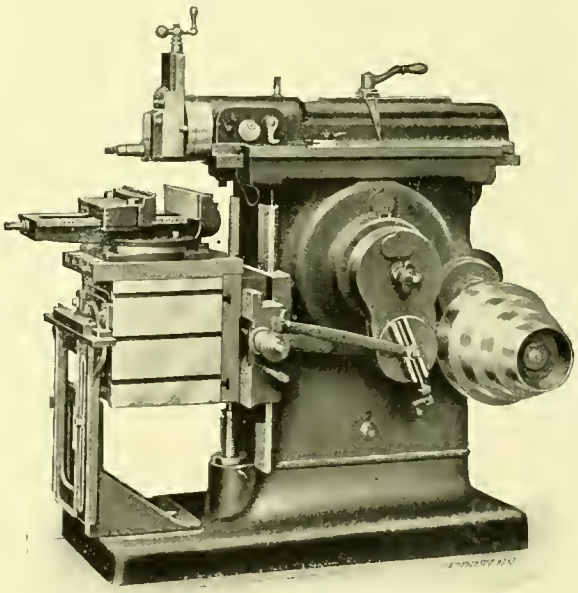
The cone is supported on a separate self-oiling bearing built out from the side of the column. This method of construction relieves the driving shaft from all belt pull. The makers claim that all change-gears are made of steel and that eight changes of speed of ram are obtainable.

The company places special emphasis upon the fact that this machine is particularly heavy and of unusual capacity for a 16-inch shaper.

The Capitol at Concord

The Central Building Company, 58 Front Street, has recently completed the building of a large addition to the Capitol at Concord, New Hampshire, and has rebuilt the older portion. In striking contrast to many public buildings, one can say of this, *summa cum laude*, that it was built within the appropriation and within the time specified.

Electric Furnaces for Making Alundum



Stockbridge 16-inch Shaper

The contract was signed in July, 1909, and the building completed in September, 1910. The contract price was $375,000, and the material was the same as in the old building —Concord granite. The dimensions of the entire structure are 160 feet front, 184 feet deep, and 64 feet high. It gives to the New Hampshire legislators new chambers for representatives and senators, new committee rooms, new offices for many State officials and several new archive rooms and vaults.

In their preliminary report, Peabody & Stearns, of Boston, the architects, tersely describe the plans finally adopted. From this report we abstract these particulars.

"The corridors, stairs and toilet rooms are lighted from the court. The boiler-room occupies a basement under the court and is lighted and aired by a monitor roof. It is large enough for a plant to heat the old and new building, and the State library building also if that is desired, and ample coal bins are provided. Every office in the building is lighted from the street fronts, and all are almost equally good. There are no inside offices. The passage from room to room is easy by corridors that form a continuous passage around both the old and new buildings. The unsafe wooden stairs in the old building are abandoned and immediate access from each side of the old building is given to new fire-proof staircases. Offices have been apportioned tentatively to the different departments with a view to making sure that the space was what is required, though on further consultation the exact position of each may be changed. The rooms marked "Committee Rooms" fill almost exactly the requirements of the various committees, but to avoid discussion we have not apportioned them to specific committees. On the same floor with the two legislative chambers the rooms for the Governor and Council are arranged in a suite with large doors which can be opened on occasions of state. To insure privacy the Council chamber has no doors to the public corridor, but is entered through a lobby or waiting room of its own.

"The specification offered with the drawings explains the quality of work we suggest. The walls on the court are faced with light brick. The two archive rooms are lined with glazed brick. The walls of these rooms are continuous from the basement floor upwards. The floors and ceilings are protected with steel beams and the openings with shutters, so that these rooms, though fitted for daily work, are in reality fire-proof vaults. The corridors have terrazzo floors. The toilet rooms and vestibules are finished in marble. There are cornices in the corridors and council rooms."

New Hampshire State Capitol

The style of necessity followed the lines of the old building with renaissance details on the new portion.

An unusual feature of this contract was the fact that the entire cost was paid out of the current funds of the State.

The illustrations show how creditably the Central Building Company fulfilled their part of the work. Nothing but praise has come to them from all parties interested.

One of the Capitol Doors

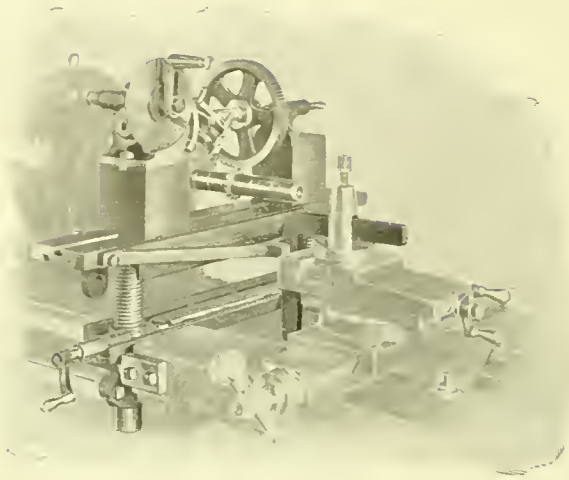
Young Lathe Milling Attachment

The Young Machine & Tool Company, Gardner and Tainter Streets, are receiving many orders for the lathe milling attachment they have recently placed upon the market.

The makers claim that it may be fitted to any make of engine lathe with a width of bed up to 13 inches, with no machine-work save drilling and tapping two holes in the lathe-carriage. They emphasize the fact that once this has been done, the attachment may be mounted or removed in less than two minutes. Once in place it allows perfect table movement in three directions, utilizing the power-feed of the lathe through the lead-screw. As many table-speeds may be secured as the lathe has change gears, and as many cutter-speeds as has the lathe-spindle.

They further state that the table may be absolutely locked against movements in any two directions, leaving the third free for the operator. The table is 20¼ inches long by 4 inches wide, and is provided with a T-slot running its full length, by means of which castings of considerable size may be clamped down and irregular surfaces milled.

The power cross-feed is secured by engaging a slot in the table extension by a dog held in the tool-post. When the compound-rest is run back so as to disengage this dog, the hand-lever feed may be used with a traverse of four inches. The company claim that this is of great convenience for doing vise work

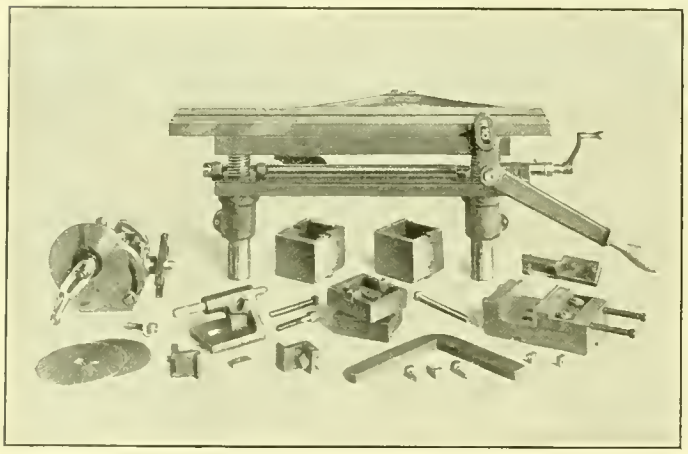


THE YOUNG ATTACHMENT CUTTING A SPUR GEAR

on small pieces and for working such materials as brass.

They also state that the indexing head and adjustable tail centre, both of which are provided with blocks, afford 133 changes, so that practically any spur, bevel or mitre gears may be cut as well as regular and special reamers, taps, cutters and similar tools.

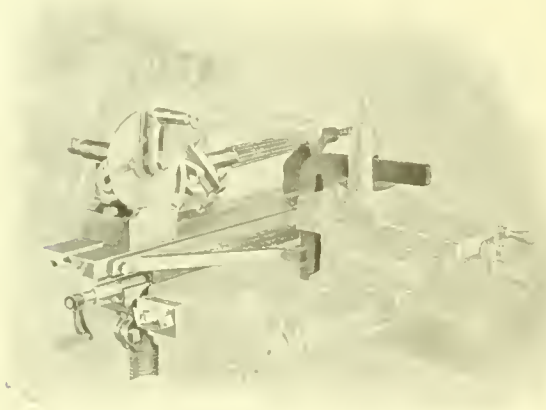
The cutters are in every case held on a mandrel mounted in



THE YOUNG ATTACHMENT DISSEMBLED

the head-spindle of the lathe, which may be operated as a stub or between centres.

The machine, so the makers say, is of great practical utility, especially to meet three very common shop conditions: where there is an occasional job of gear-cutting, but not sufficient to justify the purchase of a milling-machine; where the shop has milling to do, but cannot spare the space and power for a large machine; or where a milling-machine is constantly employed, but there are occasional extra jobs of milling to be done.



THE YOUNG ATTACHMENT FLUTING A TAPER REAMER

Co-operative Advertising

A few months ago three representative Worcester firms combined in the publication of a small folder of which mention was made in the January, 1910, issue of the Worcester Magazine. It was expected that the little folder would prove to be unique and successful advertising, but the results have exceeded expectations. Month by month the appearance of the folder has been improved and its cover designs been made more attractive.

It was a new thing in the advertising field. This month sees its expansion to an eight-page issue and the Coates Clipper Manufacturing Company, the Hill Dryer Company, the Samuel Winslow Skate Manufacturing Company and the Harrington & Richardson Arms Company join with the Wire Goods Company, Norton Company and Coes Wrench Company in its publication.

Once again Worcester is apparently leading the way for the rest of the country. Five of the leading Philadelphia manufacturers who sell to the hardware trade are combining in a similar effort. How far such co-operative advertising can be adopted, only experiment will tell, but, without question, the folder issued by these seven concerns has demonstrated its usefulness to Worcester as well as to the concerns whose notices appear therein. The covers always emphasize the fact that Worcester is "worth while," and its pages teem with terse statements of Worcester statistics to bear out the story that the beautifully tinted covers picture. It is an aptly conceived and well executed project and its 50,000 circulation helps to make Worcester products widely known.

The WORCESTER MAGAZINE Illustrated

Worcester with its Population of 145,986 IS THE IDEAL INDUSTRIAL CITY OF THIS COUNTRY

BECAUSE

Its 34,867 workmen are better paid, better housed, more skillful and more highly efficient than any others.

They are not only more constantly employed than any others, only 4.37 per cent. being idle at the present time according to the State Bureau of Labor, but—

Their average wage is $641 per annum against $450 elsewhere.

These 34,000 men and women turn out more than 300,000 different manufactured products—from a rolling-mill to a bass drum—a more diversified product than any city in the world boasts.

It is absolutely impossible for such a city to experience hard times, and inasmuch as the pay is higher and the work more constant here than in any other manufacturing city in this country, this is the place where all first-class mechanics desire to live.

Furthermore, Mr. Manufacturer, you have here not only the pick of the labor market, but this is the only Massachusetts city, and that means practically the only New England city, that has kept abreast of the times **and has not advanced its tax rate one cent in 10 years.**

Here are the figures:

	Per Cent. Increase in Population	Per Cent. Increase in Property	Per Cent. Increase in Taxes
Worcester,	**23**	**26**	**0**
Fall River,	13	25	2
Lowell,	12	11	4
Lawrence,	37	64	5
New Bedford,	55	44	8
Lynn,	30	40	11
Boston,	19	22	11
Springfield,	43	64	14
Somerville,	25	26	15
Cambridge,	14	17	18

It is not one year or two years, but ten years, that tell the story as to a city's progress, and, judged by this test, Worcester stands absolutely alone in the East. The Boston News Bureau, the highest recognized financial authority in New England, says: "Germane to any comparison of property valuations is a consideration of tax rates, for values are often arbitrarily marked up at the expense of the tax levy. **By this test Worcester makes the best showing, for its population and property have grown at the rate of 23 per cent. and 26 per cent. respectively, with no increase in the tax rate.**"

The above being the facts, this Board of Trade seeks industries and workmen of the highest type to come here and locate in order to make up the **Worcester of 200,000 people** that we are about to become.

DECEMBER, 1910

$1.50 per year — Published by the Worcester Board of Trade — 15 cents the copy

WORCESTER, MASS., U. S. A.

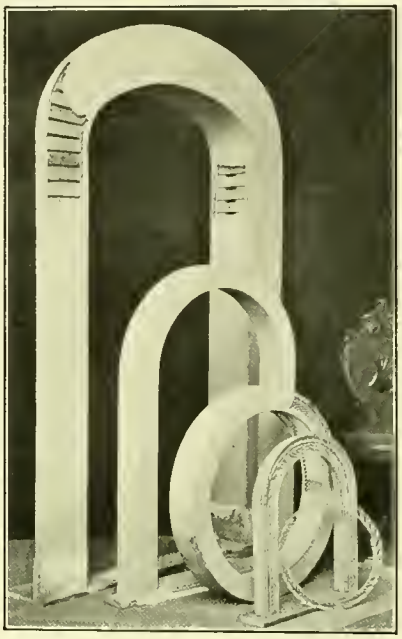
WORCESTER METAL CORNER BEAD

The only expanded metal corner bead.

The best for arches.

A Perfect Bond

A reliable protection for plaster corners on wood, brick, terra-cotta, iron, etc.



MANUFACTURED BY

JOHN L. PARKER COMPANY

62 JACKSON STREET, WORCESTER, MASS.

THE WYMAN & GORDON Co.

DROP FORGED

CRANK SHAFTS

FOR ALL MOTORS

STRONG TOUGH AND RELIABLE

THE BEST MONEY CAN BUY

WORCESTER, MASS.

SEND FOR ESTIMATES

CLEVELAND OHIO

TRADE H&R ARMS CO. MARK

Established 1871

Incorporated 1888

H&R ARMS Co

H&R

Isn't it a Beauty?

It's our latest production. A high-grade, small bore, double-barrel hammer gun. Just what the sportsman has always wanted for small game. Ideal for ladies.

20-gauge, 26 or 28-inch barrels, standard factory loads, black or smokeless powder, weight about 6 pounds.

28-gauge, 26 or 28-inch barrels, standard factory loads, black or smokeless powder, weight about 5¾ pounds.

44-caliber, 26-inch barrel, 44 W.C.F. shot cartridge or 44 X.L. shot cartridge, weight about 5¼ pounds.

All the best features of high-priced guns, including checked imported walnut stock and fore-end. Sold by first-class dealers

PRICE, $16.00

If your dealer will not supply order from us direct. Write to-day for detailed description and illustrated catalogue of other guns and H. & R. revolvers.

HARRINGTON & RICHARDSON ARMS CO., Worcester Mass.

Made in Worcester.

THE WORCESTER MAGAZINE

VOL. XIII. DECEMBER, 1910 No. 12

Published monthly by the Worcester Board of Trade, 11 Foster Street, Worcester, Mass., U. S. A., and devoted to the advancement of Worcester's business interests in this country and throughout the globe, mirroring each month the civic development and industrial progress of the Heart of the Commonwealth. Subscription price, $1.50 a year; single copies, 15 cents. Advertising rates on application. Entered at the Worcester Post Office as second class matter. Herbert N. Davison, secretary of the Worcester Board of Trade, Editor; Willard E. Freeland, Associate Editor; Edwin A. Benchley, Advertising Manager.

CONTENTS

THE CONNECTICUT RIVER ELECTRIC SYSTEM—A Concise and Accurate Account of the System Which is the Source of the Electric Energy that Moves the Wheels in Many Worcester Industries—By E. J. Richards (Gen. Supt. of the Connecticut River Transmission Co.), 325-328

THE CORN SHOW ALREADY PROVEN A POWER FOR GOOD—Agricultural Papers Give it Much Favorable Comment. Brief Notes of Awards and Exhibits, 329-331

WORCESTER'S NEW LIGHTING AND POWER PLANT—An Interesting Article Describing the Factors Considered by its Designers, the Difficulties They Overcame and the Advantages They Utilized—By Henry R. Kent (Vice-president of Westinghouse, Church, Kerr & Co.), 332-333

THE MUSEUM IDEA IN A MODERN EDUCATIONAL SYSTEM—The Development of the Industrial Museum in the Old World and the New and What Such a Museum Might Do for Worcester—By U. Waldo Cutler, 334-335

CONCRETE vs. WOOD FLOORS—Light Upon a Subject Which Interests Many Manufacturers—By James N. Heald (Heald Machine Co.), 336-338

EDITORIALS, 339-340

DEPARTMENTS, 341

BOARD OF TRADE COMMENT, 342-343

INDUSTRIAL NOTES, 344-348

PLANERS

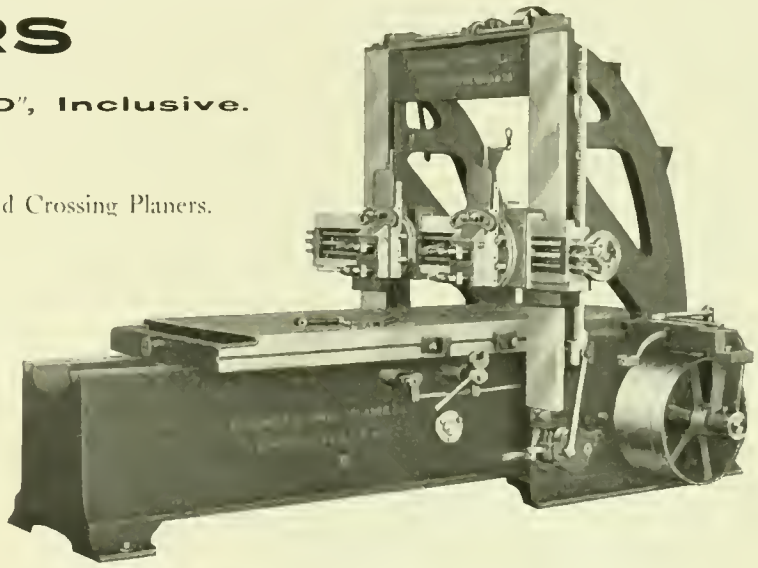
Sizes: 24" x 24" to 60" x 60", Inclusive.
Any Length.

Textile Feed Roll Fluting Planers. Frog and Crossing Planers.
Switch Point Planers.
Locomotive Connection Rod Planers.

MANUFACTURED BY

Woodward & Powell Planer Co.
Worcester, Mass.

ESTABLISHED IN 1887.
Made in Worcester.



Does Five Times as Much Work as Could be Done in the Old Way.

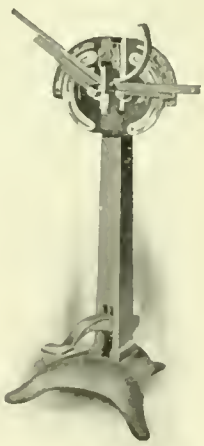
The Heald Machine Co., Worcester, Mass.
Gentlemen:—We have been using one of your "American Sash Trimmers" constantly for the last two and a half years, and are perfectly satisfied with its work.
It is a great labor saver, doing five times as much work as could be done in the old way, and doing it cleaner and better.
Yours very truly, Mohawk Valley Lbr. Co., Fultonville, N. Y.

The letter only tells of entire satisfaction. It would take pages to tell of the many details of satisfaction this machine offers.

A 30 Days' Free Trial

brings out all of these points. Just send us sample of your sash bar. We'll make up a set of special cutters and bed pieces to match. The machine will then be shipped you for thirty days' trial—no strings attached. All we ask is an opportunity to show you.

Heald Machine Co. Worcester, Mass.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The COATES Way to Polish Screws

is to put them in the patented holder attached to the Coates Flexible Shaft, and let them revolve slowly by power. By using this SCREW POLISHING OUTFIT a boy can do twice as much work of a better quality than an expert workman can turn out by hand.

Let us send you full details of this device. Get Catalogue W. M.

Coates Clipper Mfg. Co., Worcester, Mass.

Made in Worcester.

HOWARD-WESSON-CO.

4 WALNUT STREET
WORCESTER

Successors to the
ART and HALF-TONE
Departments of
WOODBURY & CO.

ORIGINAL DESIGNS and Ideas for Advertising

HALF-TONE ENGRAVING Duotones 3 and 4 color plates

PHOTOGRAPHS of MACHINES, VIEWS and Manufactured products

UNSOLICITED TESTIMONIALS
From Leading Publishers, Printers, Advertising Men and Manufacturers Prove that the Designs and Engravings made by

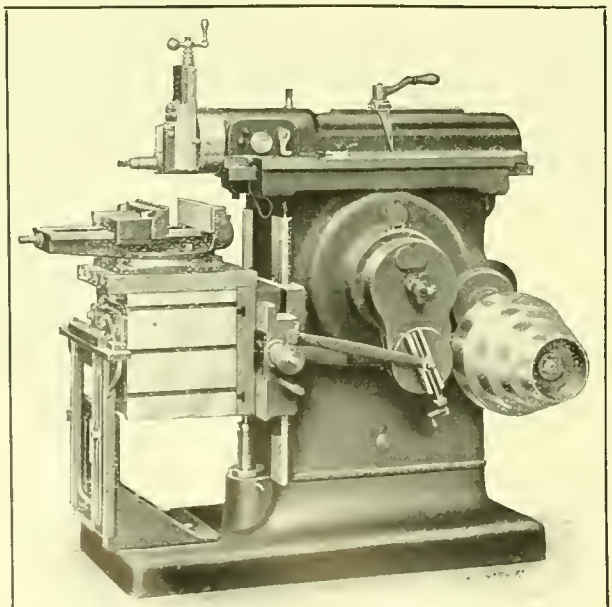
HOWARD-WESSON-COMPANY

are original and attractive with right Printing Qualities and excellent selling values.

May we interest you in new designs and engravings?

MADE IN WORCESTER HOWARD WESSON CO.

Always at your service
Telephones
2670-2671



16″ B. G. STOCKBRIDGE HIGH SPEED SHAPER

All adjustments from one side of machine. Rocker-arm of special design. New feeding features.

STOCKBRIDGE MACHINE COMPANY
WORCESTER, MASS., U. S. A.

Made in Worcester.

A Deposit in the

People's Savings Bank

452 Main St., Worcester, Mass.

Is Absolutely Safe and Always Available

Quarter Days:
February, May, August and November 1st

Deposits and withdrawals may be made by mail

Bank open for deposits Saturday evening, 6 to 8

Samuel R. Heywood, *President*
Charles M. Bent, *Treasurer*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The WORCESTER MAGAZINE

The Connecticut River Electric System*

A Concise and Accurate Account of the System Which is the Source of the Electric Energy that Moves the Wheels in Many Worcester Industries

By E. J. Richards

(General Superintendent of the Connecticut River Transmission Company)

PERHAPS before going into the details of our Worcester plant, it might be well to give you a brief description of our property in general.

At Vernon, Vt., on the Connecticut River, about five miles below Brattleboro, we have constructed our power house. This has a steel skeleton framework with concrete sub-structure and brick superstructure. It is about 250 feet long by 55 feet wide inside and is arranged for eight units. Seven of these are now installed and operating and the eighth is in the process of erection, and we expect that the ultimate development will be completed about December 1st.

Each generator has a nominal capacity of 2500 Kw., or about 3500 horse-power, and is of vertical type, of General Electric make, operating at 133 revolutions per minute. Current is generated at 2300 volts, 3 phase, 60 cycles.

The water wheel equipment for each generator consists of two 60″ turbines in one wheel case at the bottom of the wheel pit. These two wheels in regular operation, at normal head, give sufficient power to drive the generator at rated capacity. During flood period the effective head is reduced so that a third wheel has been added above the other two, and under all conditions of water we are able to get full rating from each generator. Lombard governors are used, of a type especially designed for this installation and are capable of giving full travel of the gates in one and one-half seconds. These governors control the lower pair of runners only, the gate on the upper runner being manipulated by hand.

The entire weight of the water wheels, vertical shaft and revolving field of the generator is supported by a thrust bearing located in a thrust bearing chamber directly below the generators. Each unit has an independent oil pump supplying oil to its bearing at from 150 to 250 lbs. pressure. An auxiliary pump with an auxiliary oil header furnishes oil for starting and stopping. This thrust bearing furnishes the only support for the revolving element of each, weighing about 85,000 pounds, and has worked out very satisfactorily in practice.

Four 5000 Kw., 3-phase transformers are installed, each in a separate brick compartment, and raise the pressure from 2300 volts to 66,000 volts, the normal operating transmission voltage. An additional 900 Kw. transformer is installed for supplying energy to a line to Brattleboro and surrounding nearby territory at 19,000 volts. The electrical switching arrangements are very simple. All oil switches are remote control, electrically operated, so that the switchboard panels contain control switches with pilot lamps and the necessary instruments, all operating at low voltage. The general wiring arrangement is such that a pair of generators is connected to a 5000 Kw. transformer, and it in turn either to a 66,000 volt bus or to an individual transmission line. This keeps the 2300 volt wiring down to the lowest possible amount, although a 2300 volt bus is provided so that in case of emergency any generator can be connected to any transformer. Each generator, transformer and line is provided with automatic inverse time limit relays for protection against short circuit or serious overloads.

The power house itself is located in the river and forms part of the dam. From the east end of the building, the main dam extends to the east bank of the river and forms a spillway 600 feet long. The dam is of concrete on rock foundations, and gives us an operating head of about 34 feet.

Ten flood gates are arranged through the base of the dam, which gives us considerable control of flood water, as each gate will discharge about 2000 cubic feet of water per second. These gates are motor operated and the full set of 10 can be raised in about two hours.

With the water at the crest of the dam, we form a pond about 16 miles in length, and with 4 feet of flashboards on the dam, which we usually use in the summertime, we back water upstream about 31 miles, forming a storage reservoir of no mean extent. The area of the watershed above the dam is 6250 sq. miles. With this large extent of pondage area and the considerable depth of water near the power house, we shall probably never be troubled with anchor ice, as this usually forms in swiftly running water and on exposed rapids. The past two winters have shown no evidence of this objectionable feature.

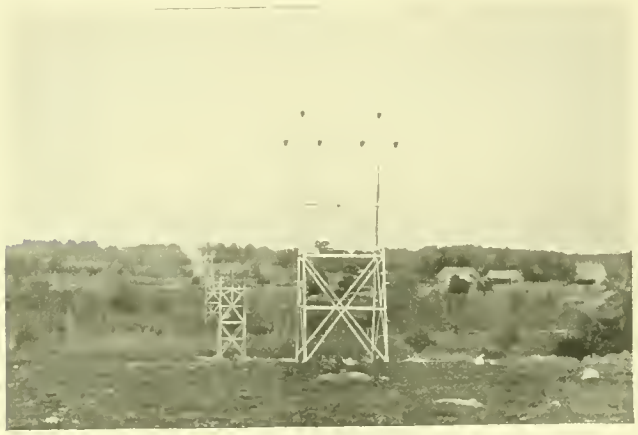
From the power house, our main transmission line extends in a southeasterly direction through the towns of Vernon, Hinsdale, Winchester, Warwick, Royalston, Winchendon, Gardner, Fitchburg, Leominster, Sterling, Clinton, West Boylston and Worcester. This consists of two 3-phase circuits on steel towers of 40, 50 and 60 feet height, set in concrete, each tower being sufficiently stable to remain in position and carry its load under all weather conditions, even if all wires in one span should become broken.

Each circuit is composed of 3 stranded copper con-

*A paper read at the meeting of the Worcester County Branch of the Worcester Polytechnic Institute Alumni, November 15, 1910.

ductors of No. 2 B. & S. gage, about ¾″ in diameter, and has a carrying capacity of about 10,000 H. P. at 5 per cent. loss. In case of emergency, one circuit would carry our entire load, although at somewhat greater loss.

Porcelain insulators are used, manufactured by the Locke Insulator Company. They are of the pin or vertical type, consisting of 4 separate parts or shells cemented together, the outside diameter being 15″ by 14″ in height and weighing about 35 pounds each. Each insulator was tested before use at 180,000 volts.



The Towers Which Support the Wires

About every ten miles is a junction tower where are located sectionalizing switches for testing purposes in emergencies. A ground wire of No. 4 copper clad, steel core wire stretches over the entire length of the line, being attached to the apex of the tower above all transmission wires, and every tower is permanently grounded, the idea being to secure protection from the effects of lightning. A private telephone line also extends the entire length of the line, with instruments at every sub-station and at each junction tower, where a small house is erected to receive the telephone and a supply of repair material and tools for emergency use.

The total length of the line is something over 66 miles and is divided into 6 sections for purposes of patrol, each man having about 10 to 12 miles to cover, which is done twice each week on foot.

As there are 885 towers on the line (exclusive of the Fitchburg branch line), this gives an average spacing of 410 ft. between towers, although we have a few larger spans, notably the one over the Wachusett Reservoir of 1940 feet.

Sub-stations are located at the following points:

Gardner, capacity 1500 Kw., supplying the citizens of Gardner, through the Gardner Eectric Light Co., and municipal plants in the towns of Templeton and Ashburnham.

Fitchburg, 4500 Kw., arranged so that this capacity can be doubled, supplying the 7 mills of the Crocker-Burbank Paper Co., using about 1400 horse-power; the three mills of the Parkhill Manufacturing Co., 1920 horse-power; the DeJonge Paper Co., about 900 horse-power, the Fitchburg Gas & Electric Light Co., about 1000 horse-power; and the Falulah Paper Co., to be ready in about two weeks, about 500 horse-power.

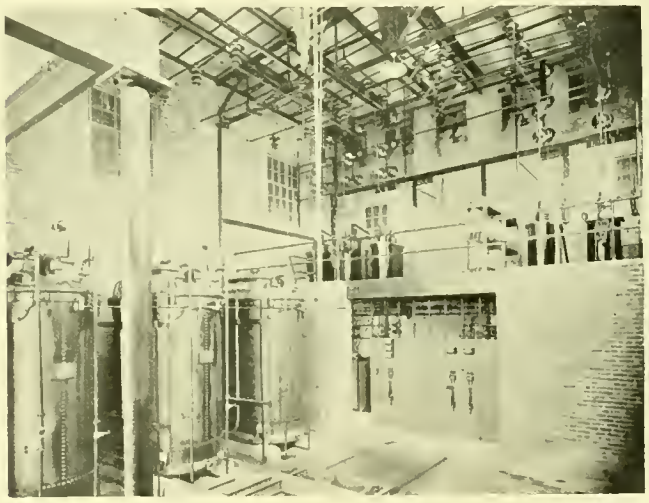
At Clinton we have a sub-station which is a duplicate of that at Fitchburg and supplies the Lancaster Mills, about 4000 horse-power, and the Marlboro Electric Co., about 800 horse-power, which in turn supplies Berlin, Westboro, Northboro, Southboro, Shrewsbury, etc.

As the electrical plant of the Lancaster Mills operates at 40 cycles, it became necessary to install frequency changers so that two 1500 Kw. motor generator sets are provided. The motor end of each unit operates directly from the 13,200 volt feeders at 60 cycles and the generators operate at 600 volts at 40 cycles, and being synchronous machines, they are convertible and can be used to pump current back into our lines if desirable.

Coming to Worcester we have a sub-station at Greendale on West Boylston Street near Jones Avenue. This is a brick structure about 70 feet by 40 and contains three 1500 Kw. transformers, stepping the main transmission voltage from 66,000 volts to 13,200 volts. Both transmission circuits enter all stations, and switching arrangements are provided so that the load of each station can be transferred from one line to the other without interrupting service. Switches in this as well as other sub-stations are electrically operated, a storage battery being provided at each station for handling these devices.

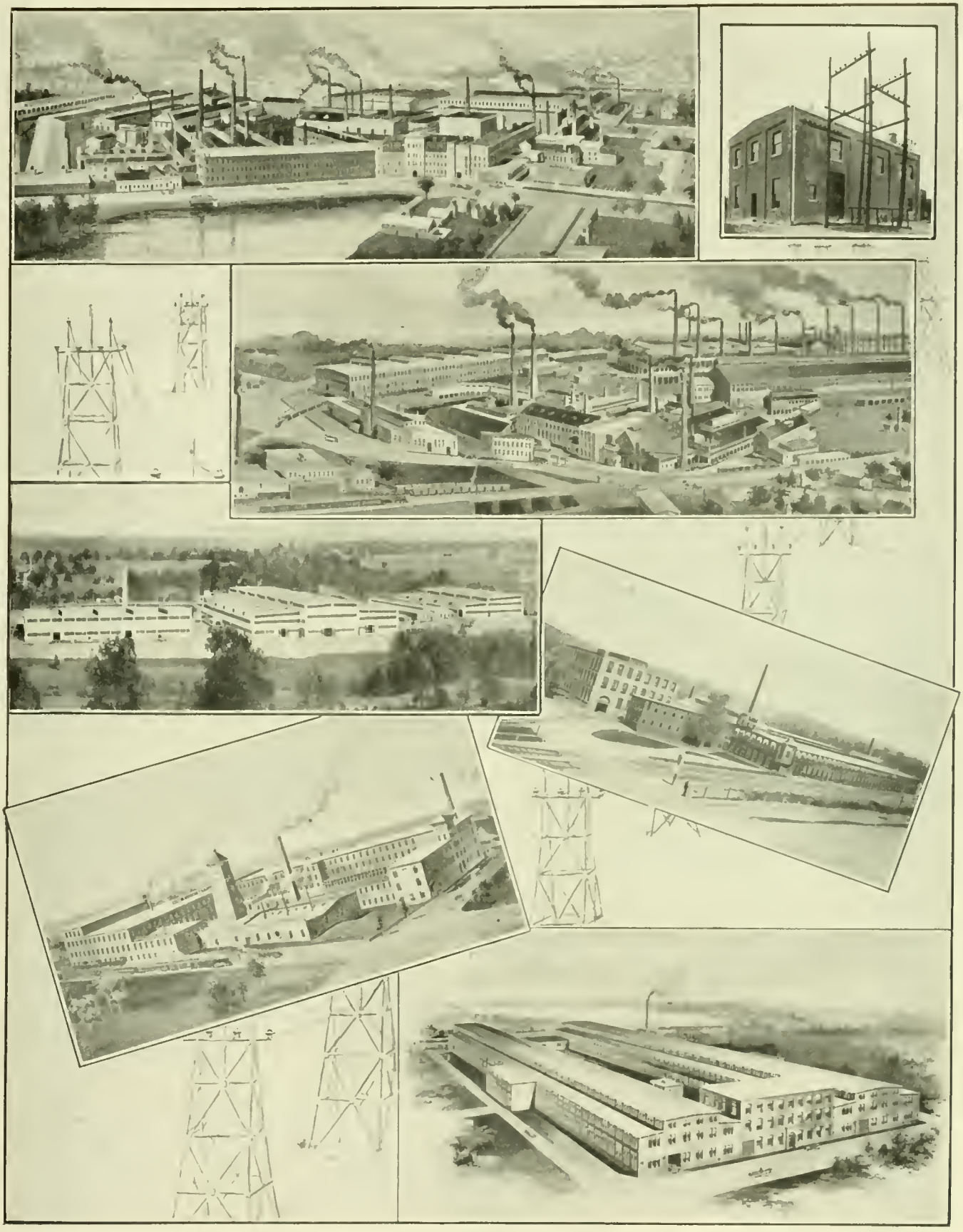
Normally the Worcester load is carried on one line and Gardner, Fitchburg and Clinton on the other, although the lines can be paralleled at each sub-station and the loads transferred during normal operation without interruption to service.

The transformers are of the oil cooled type, each weighing about 20 tons, containing about 1500 gallons of oil, the temperature of the oil being kept down by circulating coils, through which water is forced by centrifugal motor driven pumps from a reservoir or cooling basin outside the station. A city water connection is provided for emergency use.



Interior of Transformer Station

At the present time, four aerial, 3-phase circuits leave the station, two running into Worcester, one to the Osgood Bradley Car Co., and one to West Boylston, to supply that town with current for street lighting and general purposes. The two circuits running to Worcester follow West Boylston Street to Brooks Street, where they pass on to private property, to a terminal house on Brookfield Street, where our underground cable system begins and where lightning arresters and switching devices are provided for protecting, testing and interconnecting the circuits and cables. From the sub-station to Brookfield Street, a distance of 2.8 miles, the two feeders are of No. 2-0 B. & S. gage, stranded copper wire, on a wooden pole line, poles being generally 45–50 feet high, the wires all being on one arm, with space for a second and third arm if future business demands.



North Works—American Steel & Wire Co.

Transformer Station

South Works—American Steel & Wire Co.

Bradley Car Works

Morgan Spring Co.

Wright Wire Co.

Norton Grinding Co.

Worcester Manufacturing Plants Supplied with Power by the Connecticut River Transmission Co.

Arms are of 4-inch by 5-inch straight grained yellow pine, insulators are supported on metal pins, and the insulators themselves, of porcelain, were individually tested at 3 times operating voltage.

From Brookfield Street, two No. 4-0, 3-phase, paper insulated, lead encased cables follow Grove Street to the North Works of the American Steel & Wire Co., about 2400 feet. A No. 1-0, 3-phase, paper insulated, lead encased cable runs from the North Works to the South Works, a distance of 3.07 miles, in the ducts of the Worcester Electric Light Co., which are leased for the purpose. The equipment at the various mills is as follows:

South Works. One 800 Kw. motor generator set taking current at 13,200 volts and delivering at 250 volts, direct current, for general purposes around the works, and one electric furnace for refining steel, which uses from 1500 to 2000 Kw. In this furnace, molten metal from their open hearth furnaces is used in about 10-ton charges. Three electrodes, each consisting of four 8-inch carbon sticks, are automatically fed into the metal, and current at 100 volts is kept on for periods varying from one hour to one hour and a half, during which time various fluxes and alloys are added. It is reported that the quality of steel from this furnace is superior to that from the basic furnaces and the refining is accomplished in much less time.

North Works. Two motor generator sets are installed here, one of 500 and one of 800 Kw. capacity. Each motor is operated directly from the 13,200 volt lines and delivers direct current at 250 volts for general use in the mills and operates in parallel with their steam plant.

Norton Grinding Co. This company has installed 415 horse-power of motors as follows:

1 — 100 H. P.	2 — 25 H. P.
1 — 60 "	3 — 20 "
1 — 50 "	4 — 10 "
1 — 40 "	2 — 7½ "

which are used generally in their factory for operating lathes, planers and miscellaneous machine shop tools. In this installation we have a good example of modern electric motor drive, as in many cases a number of machines are grouped on one motor and in some cases they have individual motor drive, although generally the installation would be classed as group drive. With 415 horse-power of motors connected, the maximum demand averages 250 horse-power with a daily load factor of about 56½ per cent.

Bradley Car Company. In this instance we have an excellent illustration of individual motor drive, as practically every machine has its own motor. The total connected load consists of motors aggregating 1535 horse-power, divided as follows:

1 — 300 H. P.	19 — 15 H. P.
1 — 75 "	14 — 10 "
2 — 50 "	4 — 7½ "
7 — 35 "	25 — 5 "
3 — 25 "	8 — 3 "
6 — 20 "	8 — 2 "

The result to the Bradley Car Co. is a very material saving in use of power, as individual motors are shut down as soon as the need for same has ceased. Even with 1535 horse-power of motors connected, the average load is about 500 horse-power and the average load factor is 60 per cent.

It is our practice to carry our feeders to the premises of our customers and require them to install all apparatus for the conversion of the energy to suit their individual needs. We usually install disconnecting switches at the entrance point of each installation, and there our responsibility ends, except that we provide all metering equipment. We have followed the rule of furnishing both integrating and graphic wattmeters for each customer, so that from our records we know the characteristics of each customer's load.

I call your attention to the fact that we have a considerable number of synchronous motors on our system, amounting to about 4000 Kw. in capacity. This gives us an opportunity to correct the power factor on our system, and as a matter of fact, the average power factor at our Vernon station is about 90 per cent.

As you can readily understand, the flow of the Connecticut River varies with the seasons, so that at certain times of the year we have an abundance of water and a less quantity at other times. We have therefore made two classes of contracts, which we have termed primary and secondary. Primary contracts are those under which we guarantee to deliver to our customer the amount of power which he contracts for. Under our secondary contracts we reserve the right to cut off the supply on reasonable notice, giving the customer the opportunity of starting his own steam plant and carrying his own load. Naturally under our secondary contracts we sell current at a lower price, and in making primary contracts we believe that we have kept well within the capacity of the low water period of the Connecticut River, as shown by records covering a period of twenty-eight years.

In this connection I may add that we have made reciprocal contracts with some of our large customers, where steam plants have been shut down, under which contracts these steam plants are held in readiness for operation and we have the privilege of operating same, turning energy back into our system. These contracts are advantageous, as avoiding the necessity on our part of building auxiliary steam plants to guard against possible extreme low flow in the Connecticut River.

We have also recently made a contract with the Metropolitan Water and Sewage Board for the output of the hydraulic plant which they are about to build at Clinton. In this situation the water from the Wachusett Reservoir is delivered to the aqueduct leading to the Boston system and a considerable amount of power can be developed at this point. As a matter of fact, they expect to install four 1000 Kw. generators, three of which will be used normally, with the fourth one held in reserve. Inasmuch as this reservoir is usually drawn on in the summertime, it will enable us to use this power during the periods when we would naturally expect low water in the Connecticut River, so that it will form a valuable auxiliary.

Interests associated with our company are preparing a development on the Deerfield River, where we expect to develop about 50 thousand horse-power and to operate under about 800 feet head. The plans for this development are such that we expect to conserve the entire run-off of the watershed by having ample storage capacity. The engineering features of this proposition are well under way and we expect commencing active construction work early in the spring. This will prove a most valuable adjunct to our system.

The Corn Show Already Proven a Power for Good

Favorable Comment on the New England Corn Exposition is Made by Many Agricultural Papers. Some of the Awards and Descriptions of Leading Exhibits

THE New England Corn Exposition is a thing of the past, but the forceful lessons it taught New England farmers live on. In the fulfillment of its projectors' hopes it was a success; as a means of awakening New England agriculture it was a success; as a demonstration of the productiveness of New England's fields and the skill and science of New England farmers, it was a huge success; and, incidentally, it was not a financial failure.

Farming papers far and near have praised it, not only as a beautiful show, but also as a mighty impetus to the great movement, now sweeping over these six states, which is rapidly placing New England farms once again in the high place in agriculture that they formerly held—the most remunerative acres within our country's borders.

For many who came believing that New England's oft-talked-of agricultural rehabilitation was a vision of scholastic dreamers, went away convinced of its reality. So, too, many a doubter and many an unbeliever returned to their home towns to become the apostles of the new science of agriculture which is turning our rock-strewn hillsides into flowering orchards, our sod-bound uplands into waving fields of grain and our well-watered valleys into truck gardens that feed the multitudes in the industrial centres of a dozen states. They go forth, moreover, to preach that the village acre shall furnish the scratching ground for countless flocks of the ubiquitous hen; that our rich pastures shall furnish grazing for the best dairy stock in all Uncle Sam's dominions, and that our verdure-clad steeps shall once more be the feeding ground for millions of sheep; so that, as a half-century ago, New England may become largely self-supporting and be free from that dependence upon the West which has been so marked a feature of her agricultural decline during the last five decades.

The award for the best ear of corn (any type) went to Edward Handel, Glastonbury, Conn., who also won the prize for dent variety, and the honor of growing the best ear of the flint variety was given to George E. Stickney, Newburyport. A special award of $200 for the best 10-ear exhibit of white dent grown in New England in 1910 was won by E. S. Fulton, Amherst, Mass. Mr. Handel, beside winning the single ear sweepstakes, won the 10-ear grand sweepstakes, and 10-ear prize for dent corn. George E. Taylor, Jr., Shelburne, Mass., won the prize in the 10-ear exhibit of flint corn.

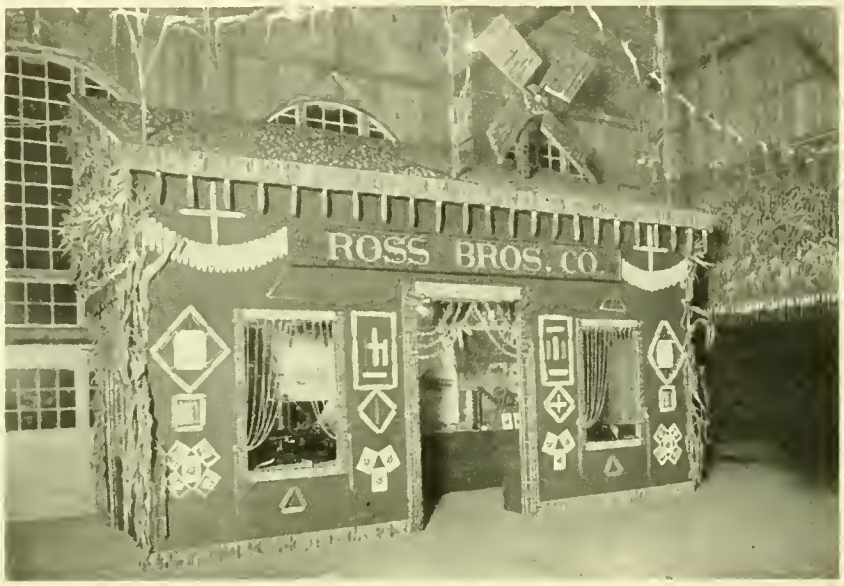
Perley E. Davis of Granby, Mass., won a special prize of $500, offered by a fertilizer manufacturer, with a yield of 5087 pounds (103¼ bushels) of moisture free corn from one acre, but was forced to take second place in the awarding of acreage prizes by the Exposition judges.

Harry S. Chapin of Sheffield, Mass., was awarded the first prize in this contest with a yield of 6100 pounds (123.8 bushels) per acre.

One of the most attractive commercial exhibits of the Corn Exposition was

that made by Ross Bros. Co. of this city. This took the form of a corn bungalow erected across one end of the main exhibition building. The building, which was 22 feet long and 15 feet wide, was an imitation of an old Dutch mill.

The roof was covered with ears of corn representing a tile roof and 30 bushels of ears of corn were used in this work. The sign on the front was also unique, being made entirely of corn, the letters covered with white corn, while the background was red; and back of the sign were placed electric lights which brought out the color scheme very prominently in the evening. The draperies at the doors were made of corn stalks and sections of ears of corn, while those at the windows were made of kernels of corn strung on strong thread. The gables were covered with selected stalks of corn with ears on, while the front of the building was ornamented with ears of various kinds of corn in different positions, making an attractive display. The windows and door casings, also the baseboard, were made of stalks of corn, and the roof was an imitation of an old Dutch mill, made entirely of corn stalks. This was in operation from 10 o'clock in the morning until 10 at night, being operated by an electric motor.



On the interior of the building was a farm scene, with a model of a silo and a model of an ensilage cutter. This was also in motion, being operated by electric power. The corn planter in the other end of the building showed the manner of dropping corn in hills and drills, and also of distributing fertilizer. This, too, was in operation, showing the work of planting corn in different quantities as done by horse power.

The striking and effective decorations on the sides and top of the main exhibition hall were contributed by a member of this Board, Mr. Walter D. Ross, of the Ross Bros. Co. The work was a labor of love on his part and well deserved the words of praise uttered by nearly every visitor. For the greater part of the month previous to the show three of his employees were busy under his supervision in placing these decorations in position, and after the show nearly two weeks were spent in removing them.

Around the main hall was a row of corn stalks, nearly 2000 being used in all. This was arranged on a green burlap background. This work had to be done before the corn was fully ripe in order that the stalks should hold their shape. After they were dry the ears were husked and were left hanging on the stalks. Under these was a row of nearly 2000 ears, hung by the husks the entire length of the building. Overhead were draped ears of corn fastened to binder twine. In all something like 10,000 ears of corn were used in this decoration.

One of the members of this Board who contributed largely of time, money and effort to the Exposition was the Hon. Theodore C. Bates. From the time that this Board first became interested in this project, he was most active in the endeavor to make the New England Corn Exposition a great educational force in New England agriculture. At his suggestion, a man thoroughly interested in similar expositions in the West was secured in the person of Mr. Leonard B. Clore of Franklin, Ind. Unquestionably this was one of the greatest factors in the success of the Exposition.

All the corn and stalks used in decorating the exterior of the exhibition hall were brought from the Bates Homestead Farm in North Brookfield, Mass., 1000 feet above tidewater, which farm was bought in 1824 by Elijah Bates and since 1876 has been owned by his son, Hon. Theodore C. Bates. Mr. Bates also furnished all the braided festoons of flint corn used in decorating the inside of the three entrance doors, which required about 300 feet of closely woven strands containing nearly 3000 ears of specially selected corn. An exhibit, consisting of a pyramid and cone, mounted on a heavy platform, was placed just inside the entrance doors. This idea of a practical demonstration of good corn was original with Mr. Bates. The corn on the cone was placed there by winding about it spirally a continuous braid of select ears of seed corn, with no ears less than 12 inches long and nearly every ear perfectly capped or tipped. There were 3000 ears on this cone alone. The pyramid was covered in regular rows with similar corn, measuring from 12½ to 14 inches long, about 2000 specially selected ears being used thereon.

Placed about on the platform at the base of the pyramid and cone were small pyramids of ten ears tied with red, white and blue silk ribbons, which made a beautiful exhibition of flint and dent corn, any one of which would have been a dangerous competitor if it had been exhibited for prizes. In fact, Professor Holden of Ames, Iowa, who is credited with being the greatest judge of corn in this country, stated that these ten ear bunches of flint corn would on their merits have beaten the exhibit which was given the first prize. Altogether 10,000 ears of carefully selected seed corn were furnished for decorative purposes by Mr. Bates. These were made visible for the closest inspection by an illumination of several hundred electric lights, including the national flag of red, white and blue. It required several trips by eight horses over the 20-mile distance between

North Brookfield and Worcester and the labor of several men for a week or more, day and night, to install Mr. Bates' beautiful decorations. The immense amount of work put into this exhibit by Mr. Bates helped greatly to make the whole corn show a success and demonstrated most forcibly to the thousands of New England farmers who attended the exhibition that it was possible to raise as good corn and as much per acre in Worcester County as can be grown anywhere in the United States. Mr. Bates had 12 acres from which were harvested about 2000 bushels of flint and dent corn.

On one acre of flint corn, Mr. Bates raised one hundred seventy-three and three tenths (173.3) bushels of ears, weighing 70 lbs. to the bushel, equivalent to 56 lbs. of shelled corn. On another acre, of flint corn in the same field, he harvested one hundred sixty-eight and six tenths (168.6) of ears, at 70 lbs. per bushel. These results were certified to by three competent men (as sworn to by them before the clerk of the courts at Worcester), who carefully measured the acres and personally superintended the husking of the corn and weighed it as it was put into the corn crib. The authorities present at the Corn Show give this yield the credit of excelling any record of flint corn in this country. For the superior quality of his corn—the record yield per acre and the excellence of his display—a beautiful gold medal was awarded to Mr. Bates, although none of his corn was entered in competition for prizes.

Every kernel of corn planted by Mr. Bates was taken from tested ears where all the six kernels of corn planted in the germinating or testing boxes had all sprouted and grown, showing good vitality and strength, and every irregularly shaped kernel was discarded. Great care was used in the preparation of the field, in the quality and quantity of fertilizer used and in the cultivation during the period of growth. Mr. Bates had seed corn obtained from nine different states and Canada, some of it costing $10 per bushel on the ears, but it was of such excellent quality that it paid well in the end, aiding materially in giving a record yield and giving Worcester County a notable position in the annals of corn growing.

The activities of this Board in the New England Corn Exposition were by no means confined to the efforts of these two members. One thousand dollars was pledged to its officers by the Board and considerably over that sum was subscribed and paid in. In every way assistance was rendered to its manager and executive committee.

The effect of the show upon all New England agriculture is very gratifying and the first Corn Exposition ever held in the East has made the name of Worcester even more prominent than before in the list of live cities.

Worcester's New Lighting and Power Plant*

An Article Wherein is Described in an Interesting Way the Factors Which Were Considered by its Designers, the Difficulties They Overcame, and the Advantages They Utilized in the Construction of this Modern Power House

By Henry R. Kent

(Vice-president of Westinghouse, Church, Kerr & Co.)

I WAS asked to describe the engineering problems of power station work, and I will try to point out some of the interesting problems and features of the new plant the Worcester Electric Light Company is now constructing on Webster Street.

For the past year this company has been giving very careful consideration to ways and means of taking care of its increasing output, and in March of this year gave instructions to the engineers to produce a new plant to take care of its necessities properly and safely and to have it ready for the Christmas load.

The result is the plant now nearing completion. Constructive field operations were inaugurated May 21 and current was commercially delivered to the company's lines on Nov. 9, five months and eighteen days later.

Many things had to be done before the field work could start. The site had to be studied and cleared, equipment selected and plans made and approved. The selection of the site for the plant was most fortunate. The plot is on Webster Street between Little River and Webster Court and is of ample area for all present and prospective requirements.

The rapid growth of electric light stations makes it very necessary to provide, both in acreage and in design, for economical and material extension.

It is necessary to exercise the greatest care in determining the bearing quality of the soil in order to insure suitable foundation conditions for the concentrated weights imposed in the modern power station. Too great care cannot be exercised in this regard, and on the Webster Street site a large number of borings at various points, completely covering the property to be used, were sunk to determine the character of sub-soil underlying the building. It was found that good gravel bottom underlay the surface at a practically uniform depth and at a grade that permitted economical foundation construction.

To illustrate how necessary it is to scrutinize carefully this matter and how unsafe it is to draw general conclusions from specific information, I will cite our experience on this work.

After the first plans were drawn and these soundings made it was found desirable, for convenience in locating the railroad track that supplies coal to the power house, to move the stacks fourteen feet, six inches from the original location towards Webster Court and beyond the area covered by the borings. The stack foundations were the first work started, and when the excavation had been carried down to the point where gravel should have been met, judging from the borings, there was no gravel there. As there are no loads in the station more concentrated than the loads imposed by the stacks, it was imperative that the foundations should be sufficient, and when we discovered the absence of the gravel bed we were much worried, and immediately started an investigation to determine the true condition of affairs. The gravel was located some seven feet lower under the new position for the stacks than under the original location, while the gravel was found, just as it was expected, under the foundations for the walls of the building.

What happened in this case was that a "dip," likely caused by some old stream bed, occurred just within the lines of our extended operation.

A spur of the Boston & Albany Railroad is on the property, thus giving proper facilities for receiving coal in original bulk—also for the convenient delivery of apparatus and materials.

Very little grading was necessary, and while the plant is at present slightly outside the centre of distribution, this is not in itself a serious matter, as the distance does not inflict a severe penalty with the character of current generated, and the growth of the market will undoubtedly be towards and not away from the plant.

It will be seen that all the principal requisites are found in the location selected, and there were some unique opportunities which were taken advantage of to economize first cost and reduce the cost of operation.

A contour map of the property was secured which also gave the level of the water in Curtis Pond.

This pond, or rather system of ponds, supplied water through two flumes to wheels in the mill that formerly occupied the power house site.

It was found that with some repair and the construction of new intakes and racks these flumes could be utilized to supply the new plant with its condensing and feed water.

A study of the contour map showed that the grades allowed the design of a station permitting the water to flow to the plant in one flume and from the plant to the pond in the other. This is of economic value, as it permits of a recirculation without pumping of the water for condenser work which might be desirable in times of low water, expecially when the plant reaches its full capacity.

I know of no other plant where it is possible to re-use the water in the condensers without pumping.

This station is being built to supply all the primary current for the Worcester Electric Light Company. The Faraday Street plant will be discontinued as a generating plant when the new plant is in full operation. Much of the current from the new plant will go direct to Faraday Street, where new and modern switching equipment is being installed and will be distributed from there.

This method of distribution is now being followed generally in the larger cities on account of the extent of territory to be covered and the impossibility of securing suitable sites in the heart of the city.

The generating stations are forced to the water front or suburbs to secure coal and water facilities and the centres are served from substations.

*A paper read at the meeting of the Worcester County Branch of the Worcester Polytechnic Institute Alumni, November 15, 1910.

The increasing demands for electric current are so rapid that station design should provide for convenient expansion of the plant. The average annual increase in output of seven plants in this vicinity, taken for the years 1906 and 1907, is 17.6 per cent.

Having all this in mind the design of the station and its location on the property are very important problems. After much consideration, having regard for the convenient handling of coal and access to water for condensing, it was decided to locate the initial installation, starting from the property line at Webster Court and sufficiently back from the property line on Webster Street so that the projected building would line up with Webster Street where it takes a turn at the bridge over Middle River.

The arrangement of apparatus in the building provided for the boilers to face a central firing aisle parallel with Webster Street, and additions will be made on an extension of the present centre line of the boiler room and symmetrical with the initial installation. This will allow of the convenient extension of the coal distributing machinery and will make the unloading, elevating and handling equipment applicable to the plant when extended.

The turbines are placed with their shafts at right angles to Webster Street and parallel with each other in the room occupying the space between the switchboard structure and the boilers. This arrangement allows of an economical increase to the power plant by adding boiler and turbine units as required.

The switchboard space is parallel with Webster Street and can be extended to meet the increased requirements of the station conveniently with the boiler and turbine room.

In selecting the equipment there are many factors that should be determined before decisions are reached. A modern plant of this size would hardly attempt to operate without mechanical furnaces, and the character of coal to be burned must be ascertained to allow of intelligent judgment in selecting the type and size of furnace.

It was here decided to plan to use mixed anthracite and bituminous coal. Investigation indicated that the Taylor stoker was best adapted to the conditions, and it is being installed. If straight anthracite, a different furnace would probably have been better, and with clear bituminous still other forms would have been considered.

The quality of feed water for the boilers should be known to determine the type of feed water heater and the necessity of treatment. Two chemical analyses of Curtis Pond water made in separate laboratories showed this to be exceptionally good water, requiring no treatment and permitting of the simplest form of feed water heater to be used.

Along these lines, carefully determining the possibilities and limitations of local conditions, there has been designed a station that is compact, yet with ample space for handling equipment and with special regard for light and ventilation.

The building is laid out to house 8000 Kw., of which 6000 Kw. in three units, with the balance of the machinery to correspond, is now being installed. The boilers are high pressure water tube boilers, 600 horse-power units, designed for 200 pounds working pressure and fitted with internal superheaters to give 100 degrees Fahrenheit superheat, set in three batteries of two boilers each.

The condensers are of the mixing type of a new form known as the Wheeler counter-flow condenser. These are supplied with a dry vacuum pump and a pump for handling the circulating water.

The station has been designed with a view of reducing to the lowest terms the possibility of interruption to the service, and no expense has been spared to insure reliability of operation.

The steam piping has been made up of pipe with welded flanges, welded on by the old-fashioned coke furnace method. The fittings are cast steel and the valves are cast steel bodies. The arrangement of piping is such that any boiler or any section of the header can be cut out without interruption to the operation of the plant.

The same care has been exercised in the design of the feed piping, two feed pumps being installed and so arranged as to make it possible to feed the entire boiler equipment with either pump through a duplicate feed main.

In order to insure continuity of service a coal storage yard has been designed and is being installed. This will have a capacity to store about 6000 tons of coal in order that there may always be an ample supply of fuel at the plant. Ordinarily the coal will be handled directly from the cars to the overhead bins in the power house. This coal will pass through a crusher and will be elevated onto a belt conveyor and distributed into the overhead storage bins. When coal is being unloaded to the storage space it will be dumped from the cars into a pit and will be conveyed by means of a grab bucket and crane and distributed in the enclosed space forming the coal yard. When this coal is used in the plant it will be picked up by the grab bucket and delivered to a miniature steel hopper dump car, which will be shifted to the coal hopper adjacent to the boiler room and then handled by the regular equipment into the overhead storage.

Ashes will be removed from the building by means of a skip hoist, which will be charged by ash cars that run in the boiler room basement under the ash hoppers. These ashes will be delivered by the skip into an overhead storage bin outside the building, where they can be delivered by gravity either to railroad cars or to wagons for city distribution.

The electrical switching arrangement and system of cables occupy space on three levels in the switchboard room. The grade of the lower floor is depressed for two reasons: First, to allow of convenient access to the underground duct system, and, second, to avoid carrying the switchboard room too high, which would cut off light and ventilation from the turbine room and detract from the architectural effect of the building. On this floor the feeder cables, regulators and rheostats are located.

On the next floor the bus and switch structure is provided, and on the upper floor is the operating room with the instruments and controlling switches and storage battery for operating main oil switches. Offices for the operating force are also provided on this floor.

The instructions to the engineers were to provide a plant where continuity of service was the first consideration, to provide sufficiency, and above all, reliability, and to have it running to take the Christmas load. The result is a fireproof building with the best modern machinery that money can buy, safeguarded so far as we know how to safeguard against interruption, and it is now running under load.

I hope that we have succeeded in providing all that was expected, but shall be disappointed if the necessity for the completing unit for the initial installation is not needed sooner than was anticipated, as the use of electricity by a community is one of the very safe measures of its progress and prosperity.

The Museum Idea in a Modern Educational System

The Development of the Industrial Museum in the Old World and the New and What Such a Museum Might Do for Worcester

By U. Waldo Cutler

WORCESTER is at least fairly liberal in supporting its schools. It gladly provides for its public library. It has cordially adopted the playgrounds. It has many other privately sustained philanthropies that look toward a better to-morrow for our city. It is showing a commendable openness of mind toward some less fully accredited educational novelties. But there is one feature of a complete educational system, approved abroad and to some extent elsewhere in America, that we have as yet hardly thought of. A good deal has been said in some of the magazines about the educational value of a museum, but most of us have as yet learned to think of a museum only as a collection of works of art in a stately building, or as a huddle of "old junk" in a musty curiosity shop, or as stacks of stiff stuffed birds behind glass doors. That a museum could bear closest relation to the business enterprise of a teeming city would seem to many of us as at least visionary. It is highly "respectable" to have an art museum, of course. There will naturally be, we say, off in some corner, a collection of historical relics; this also is "respectable," if only as a means of entertainment for people out of active life. Some go so far as to allow that a collection of natural history specimens may help to keep children out of mischief. But to relate a museum to industry or commerce is preposterous in the eyes of many an active so-called practical man of affairs in the midst of the current of the business world.

But a new view of this matter is coming forward—the conception that a public museum of the right sort is quite as consistent with life in an industrial community as is a public library. Man in his civilized state is eye-minded; he learns more easily and more pleasantly and more permanently through the sense of sight than through that of hearing. Education must come, then, quite largely through personal observation rather than through hearsay. Much of what we wish incorporated in the characters of the coming generation may most advantageously be imparted visually to the boys and girls of the present. This fact has long been recognized fully in the realm of fine art. The influence of beautiful objects—pictures, statuary, monuments of architecture, etc.—in cultivating the aesthetic tastes is a matter of common knowledge. Historical relics stimulate reverence for the past, and natural history specimens quicken the power to observe accurately the wild things in woods and fields. But in an age when our chief reliance is on intelligent, thrifty, practical industry, here in a community where employment in the industrial arts is the chief resource for happiness and even for existence, an *industrial* museum is yet to be planned for in our educational scheme.

We are proud of the museums we have, and we wish for them further opportunities for accomplishing their worthy ends. The Natural History Museum is carrying on a most commendable work as a public educator in its own department. The museum of the Society of Antiquity fills its present opportunity full to overflowing. Its work as a teacher along its special lines needs recognition not yet given it. If its collections could be spread over five times the present space, so that objects could be more effectively grouped, after the manner of the historical museums of the enterprising little cities of Switzerland, the important lessons of local history could be better learned. And our noble Art Museum, equipped to supply all present æsthetic needs for our city, merits all the praise it receives.

But our greatest present lack is not along the line of decorative art or of local or natural history. Opportunity for effective work at a worthy and appropriate calling is the greatest educator, the fundamental philanthropy, the prime source of human happiness and welfare. Whatever widens this opportunity for self-realization just through the open channel of our practical activities; whatever will make our tens of thousands of artisans more contented and thorough and intelligent at their honorable tasks; whatever will make our citizens better acquainted with life as it is lived by 95 per cent. of our people; whatever will help the boys and girls to choose wisely a vocation through visible presentation of Worcester's manifold lines of activity; whatever will keep the visionary, swollen-headed young aspirant after inventor's honors from inordinate self-appreciation; whatever will incite skill to do its best and the skilled to be their best,—this is what we must have in our educational system.

There is a clear call for a museum that is close to the current of the life of the community as a whole, illustrating the local activities—economic, commercial, technical. Such a museum should adapt itself freely to the needs of the mechanic; of the young man making his own way, perhaps, in evening courses or by the help of a correspondence school; of the young woman ambitious to do better work in shop or home or factory; of the farmer and tradesman and inventor. It should include properly organized collections of materials in all the different stages of manufacture and distribution. There should be models and plans and apparatus, showing processes and results as they are now in every-day operation. As a whole, such a museum should tell its every-day story simply and plainly to the unschooled as well as to the educated, and it should be so up-to-date in its lesson of progress in the industrial arts and of science as applied to every-day tasks that it will bear little relation to the collections of antiquarians.

Geneva long ago heeded this call, and in a community where the making of watches and other instruments of precision is the important industry, there is the well-known horological museum. In St. Gall whose embroideries make this new-old Swiss city famous the world over, the influence of the industrial museum has for thirty years been recognized as pre-eminent in building up the thriving modern industrial life of a city noted in a far different way a thousand years ago. So the English Worcester has its extensive museum of pottery, and Dublin its splendid permanent exhibition of laces, each undoubtedly a prominent factor in improving the designs and stimulating the characteristic line of activity in its given locality.

So also many of the enterprising modern cities of the world called Old have established the industrial museum and equipped it attractively for the real task of co-operating with the factory on the one hand and with the library and the school on the other to improve the quality of the men and women precisely through improving the quality of their every-day workmanship. Glasgow has a small but good example of this sort of popular educator, where may be seen the construction of the loom, the art of designing, weaving, printing, and dyeing of calico, together with specimens of the raw material and of the finished product. South Kensington has as one of its many departments a great museum of steam engineering. Berlin has its great railway museum—the "Verkehrs und Baumuseum," and in the Field Columbian Museum of Chicago the most prominent feature is a museum of steam transportation, where one may study not only the history of the development of the locomotive, but also plans for terminals, exhibits of railway material, etc., etc. The Bethnal Green Museum in the very heart of teeming East London at one time showed a considerable range of homely industries, such as the production, manufacture, and uses of leather, flax, corn, wax, cocoa, etc.

An industrial museum, hospitably conducted, easily accessible to working people, kept up to the times, and strictly adapted to local conditions, can not fail to be very popular, for ordinary people are interested in familiar things. So every country town should try to build up an agricultural museum, and every sea-port should seek its special opportunity in collections showing shipbuilding of all sorts, sail and rope making, etc. Berne, in Switzerland, has as a prominent attraction its Alpine Museum, where may be seen, besides maps and reliefs and charts in complete and instructive display, all sorts of appliances for mountain climbing—clothing, tools, utensils, means for relief in case of accident, animal and plant life of high altitudes, minerals to be found in the Alps, etc.

In this connection the giant Commercial Museum in Philadelphia is pre-eminent. Here the institution centres, not about the production of that which characterizes the varied industries of the city, but about its distribution the world over. The Commercial Museum—really a whole group of institutions—occupies a large tract of land, and is thus far housed in three permanent buildings, with plans allowing for great expansion in the future. The institution is being developed and is controlled by a board of trustees, well known citizens, appointed by the city council and responsible to the Mayor. The large sum of money expended in the last ten or fifteen years for its equipment and support has in large measure been privately contributed, though from the first it seems to have had the approval, and to some extent the assistance, of the city government. Its very foundation shows the foresight of the citizens of the greatest manufacturing centre in the world. Its purpose is to promote American commerce through extending the knowledge of customs and conditions of other countries. Its most conspicuous feature is a great collection of commercial material. Here are illustrated imports and exports from all over the world; characteristic industries and customs; products and opportunities for enterprise; methods, processes, implements, etc., all organized and arranged so as to teach what is so necessary in business life, how to anticipate or meet or create a want that we can satisfy, and how to supply more economically our own need of raw material out of the resources of other countries near or remote.

We can imagine the economic importance, the popular interest, and the real educational value of such exhibitions from the Philippines and other sections of the Orient, from Africa and Latin America, and even from distant parts of our own land. But supplementary to these extensive and varied collections, there has also grown up at this Philadelphia museum a great system of special public lectures and laboratory investigations, and also a free commercial and industrial library of reference. One exceedingly interesting department of this museum's activities is the Foreign Trade Bureau. This undertakes to develop international trade by furnishing all sorts of information about proper packing of goods for shipment abroad, about the conditions in foreign markets, about freight rates and routes, about the various problems of supply and demand, about local agents in foreign ports, about patent laws abroad, etc. This Bureau has facilities for translating foreign business letters, and for answering them as well, in appropriate tongue. It publishes a Weekly Bulletin and a monthly journal—"The Commercial American." Such is only a suggestion of the scope of this twentieth century museum. Surely this is no collection of dried mummies or even of mutely eloquent statues and pictures. It is a vital, "hustling," working, effective institution, if any wheel in our modern educational system can be classed as effective in the material sense.

Now how does all this apply to Worcester? What has it to do with our busy, practical life? What might we be doing that we have not yet undertaken in the direction of well-accredited, practicable educational features that may be really expressive of Worcester's social personality—expressive of the peculiar genius and special ideals of our aggressive community existence? A few of our great factories already have small museums where the development of some special industry is made to appeal to the eye of a stray visitor. Once a feeble attempt was made toward something more general, that might have become a sort of industrial museum in the European sense, but the idea was abandoned almost before it was fully defined in the mind of the originator. Suppose, now, there were started, in a small way at first, a permanent exhibition of raw materials used in even some of all the varied industries of our city. Even such a collection would be interesting and instructive, and not unprofitable as an advertisement. Then combine with this such a display of the processes of manufacture in each case, so far as thought desirable, and then add in permanent and accessible and attractive form a collection of the vast variety of finished products that we send out over the waiting world, and should we not soon build up a museum that would be invaluable as a guide to boys and girls in choosing a vocation; invaluable also in stimulating workmen and employers to do and to be their best; invaluable, still further, to our community as a whole, through the publicity thus given to our industrial opportunities and to our supplies seeking a market? Such a museum, organized and grouped, not chiefly with reference to advertising or "booming" Worcester, but with a real educational purpose, ought to prove a most important auxiliary to our school and library system. Opened freely, with competent custodians to answer questions and to guide visitors in their observations; accessible to hand-workers of every sort; housed generously so that there would be no crowding either of people or of exhibits; provided amply

(Continued on page 338.)

Concrete vs. Wood Flooring

Light Upon a Subject which Interests Many Manufacturers, and Some Conclusions Drawn from Reports of Factory Owners of Practical Experience with Concrete and Wood Floors in Machine Shops

By James N. Heald

THE following paper, which was presented at the meeting in New York, October 16, 1910, of the National Machine Tool Builders' Association by James N. Heald, of the Heald Machine Company of this city, will interest every prospective factory builder. No subject presented at the meeting provoked more discussion.

Letters were sent out in which two questions were asked: Are you using concrete floors at present, and are they satisfactory to you and the workmen? If you were to build a new shop, what would your experience lead you to use for the floors, and how would they be constructed?

In answer to these inquiries forty letters were received, of which eight were distinctly in favor of concrete floors for machine shop use. There were twenty-six decidedly in favor of wood, and six were non-committal, being favorable to either under certain conditions and for certain work.

These reports came with only one or two exceptions, from those operating machine shops, although sixteen of them were not machine tool builders. All of the eight who preferred concrete have had experience with both wood floors and concrete floors. Seventeen of the twenty-six preferring wood floors have actually had experience with both; the other nine based their preference for wood upon investigations made by them when looking up this matter for their own benefit.

The general point of view of the writers of these letters can best be given, perhaps, by two or three extracts from the letters sent me, and I will quote, first, one in favor of concrete, written by the President of one of the leading machine tool builders of the country, which you will recognize readily from being located in a town in southern Vermont.

We built a three-story cement and steel building in 1904, and in 1907 we put up a saw-tooth single story building. In both of these buildings we have used concrete floors without wood. We noticed the men who were accustomed to stand on a wood floor became more foot-tired, at least at first, in the cement building, and possibly those whose work gave them an opportunity to move about were also slightly affected in the same way, but as for this we are not sure.

We do know that in these buildings with floors we provide a thin platform of wood for men who do not move about; we do not find it necessary to provide it for others. The planer and the bench hands whose work calls for standing in one position most of the time need the wood insulation.

At first we thought it was the difference in the hardness of the material, and in fact this may be one of the reasons why it is more tiresome, but the Aberthaw Construction Co. put out a circular on this subject, in which it was suggested or stated that the reason cement floor was objectionable was that it carried off the heat from the men's feet faster than the wood, which is not as much of a conductor of heat, and that, with the same temperature, this greater heat conductor produces the undesirable effects, and in that paper we think it used the comparison of the difference in feeling in the hand of an iron and wood surface of the same temperature. Among other objections was that the cement was supposed to increase rheumatic troubles. We have had no such complaints, and have felt that the advantages more than offset the disadvantages.

It makes a cleaner, more wholesome shop—one in which it is possible to clean the floors from all of the objectionable matter that accumulates in the cracks of wood floors, and it also makes possible the introduction of cuspidors cast directly in the floor, into which we run a flushing stream at regular intervals.

If plants could be heated through simply warming the floor, as we believe has been suggested, then the only serious objection to the cement floor would be removed. It is possible that the hollow tile may serve for this purpose. I refer to the hollow tile made by the National Fire Proofing Co. A layer of this tile with openings registering the entire width of the building, and connected with conduit pipes on the lines already suggested, would give a very even distribution of heat and would not make an expensive floor, although the total thickness would have to be probably 2 inches under and 2 inches over of cement, with hollow tile of 4 inches or 6 inches, according to the load.

This would bring the temperature of the floor up closer to that of the workmen's feet, and would make the floor the warmest part of the building, and do away with pipes of all kinds. It might not be necessary to have any immediate openings into the room, excepting for a slight circulation. There is no reason why steam pipes could not be put in the same openings.

There remains the element that always enters into the use of concrete which must be seriously considered by anyone building a more than one-story building. A few shovels of earth without the proper amount of cement, or a few shovelfuls of inferior earth material instead of sharp sand, may happen to be placed where it will cause serious disaster, but we have had no experience of this kind, excepting that we have had to worry about it, particularly at first.

Among the letters favoring wood floors, one from a leading manufacturer of twist drills in Cleveland, Ohio, is as follows:

We have one building in our group made all out of concrete. This building is three stories high and all the floors are concrete. We have been greatly disappointed in the concrete floors. In the first place, any water spilled on one of the floors filters through to the next. These floors are not suitable for running trucks over them, as they chip out and wear in grooves. Our men do not like them and complain of the effect that standing on the concrete floors has upon their legs. This may be imaginary, but it is to be considered. We have recently made an experiment on these floors by covering them with about 2 in. of first-class paving asphaltum, put on by the company that does the asphaltum paving in this city. So far we think this is an improvement, and another year may extend this coating over all the floors in this building. In our judgment the best floor for a factory is narrow matched maple. It wears smoothly and is easily repaired.

A manufacturer of automobile parts in Detroit, Mich., says:

We are using concrete floors in our factory building, which is devoted to light machine shop manufacturing operations. From our experience so far, we are quite firmly of the opinion that this is a decided mistake, and that wood floors would be much better and more economical in the long run for such occupany. While there have been some few cases of complaint from workmen, this has not been at all serious. So our objection to concrete is more on the score of its being unsuitable as a wearing and working surface in general as applied to machine shop operations.

As a matter of wear, we find it giving way much more rapidly than we had anticipated, while, due to this, and at the same time aggravated by the presence of metal chips and oil, it is rather difficult to keep clean. Another serious objection to concrete is the invariable damage suffered by tools and finished pieces of work dropped upon it; 1 in. to $1\frac{1}{2}$ x 3 in. maple is generally considered to be the best flooring material and is what we should use in future.

A manufacturer in Stamford, Conn., writes:

We have in two instances in our factory examples of concrete floors on which active manufacturing is being conducted, and in both cases, during the winter months, we have trouble in keeping the men comfortable in these rooms. The reason undoubtedly is due to the fact that the concrete floors abstract the heat of the body from the feet, chilling the blood and consequently producing a feeling of discomfort which is attributed by the employees to want of proper heat in the room.

The main portion of our factory is composed of wooden floor of three thicknesses—namely, a supporting floor of sufficient strength underneath, an intermediate floor and a top wearing floor of maple.

We find that this construction of flooring gives us excellent satisfaction from the standpoint of the employees, and likewise has the advantage of being readily repaired by replacing the upper surface without disturbing the main features of the construction of the building.

In two of the buildings we have used the reinforced concrete form of construction as far as the floors and columns are concerned, and in this instance we have put screeds in the concrete, nailing down an intermediate floor and top wearing floor of hard maple as above. This method has given excellent satisfaction, and the writer has had the chance of studying, from his own personal feelings, the effects of such a floor on account of our main offices being laid in one of these reinforced concrete buildings.

On the ground floor we have used a method of tar concrete for a depth of 4 inches in which are buried screeds, and an intermediate floor and top maple floor as in the above examples cited. This method for the ground floor work is highly satisfactory, as it keeps out the dampness and preserves the floor. The writer had the experience within the past six months of taking up a portion of a floor of this character which had been down 30 years. The under flooring and screeds were just as clean and well preserved as if they had just come from the lumber yard.

In cases where we have found sensitive persons complaining as to the conditions arising from the use of concrete floors, we have made a lattice of wood for the employee to stand upon, with a marked improvement in his apparent physical comfort.

During the last three or four years the use of concrete for factory buildings has greatly increased and, when properly reinforced, has proved entirely satisfactory. Owing to the reductions in the cost of cement and increases in the cost of other materials, the use of reinforced concrete has become quite general, and therefore the floors of such structures are worthy of special notice. Reinforced concrete floors are made in numerous styles by different engineers, but the fundamental idea is that of using bars or other forms of steel as the tension members imbedded in concrete bodies. The floor proper is simply a slab like a cement sidewalk with reinforcement near the lower surface and supported by beams of concrete, also reinforced, which are formed as a part of the slab.

It is claimed by some of the advocates of concrete floors that the real cause of the workman's complaint is undoubtedly the coldness and not the hardness of concrete floors. Everyone knows that the coolest seat on a hot day is a stone doorstep, and like the stone step, the concrete floor feels colder than the wood floor. When a concrete floor is in contact with the ground, it actively withdraws heat from its inner surface, because it is a good heat conductor.

At all seasons the concrete floor feels colder than the wood floor, and the effect of this on the operator who stands for hours in one place is gradually to chill his legs and thus still the circulation in them. In some shops the operators not only bring in boards and the like to stand on, but have gone so far as to wear heavy overshoes during working hours.

The actual heating of the concrete floor slab itself by means of contained steampipes or hot-air ducts arranged in the substance of the flooring has proved remarkably successful in the plant of the Morse Chain Company, Ithaca, N. Y. In this plant the workrooms are heated by radiation from the concrete floors, with no direct admission of hot air except in extremely severe weather. The experience of this company seems to demonstrate that workmen have mistakenly attributed the effects of the cement floor to its "hardness," when in fact it was the "coldness" which was to blame.

Taking up now the requirements of satisfactory floors of concrete, we come first to the wearing qualities:

1. Liability of granolithic to wear into hollows or ruts under heavy trucking.

2. Dust, due to abrasion of the floor surface, which is sometimes merely disagreeable, but which in some cases works damage to machinery and product.

3. The difficulty of making effective repairs in granolithic finish.

4. Trouble in attaching machines to granolithic floors.

Trucking, as shown by the letters received, develops quite a little trouble, especially where the concrete blocks are marked off into squares, as is usually done. It would be much better, so far as this point is concerned, if the marking off of the squares was omitted in such floors, which is done partly for looks and partly that any cracks which develop may run through these markings and in that way not show in the level surface.

One suggestion made by an advocate of cement floors is that flat iron bars slightly separated and not on edge be imbedded in the floor in the direction in which the trucking is done, and in that way take the wear of the trucks and save the concrete. They are better than solid flat plates, which become polished and therefore very slippery after a time.

With reference to the question of dust, this has been struggled with by all the advocates and builders of concrete floors. Various paints are offered to prevent this, but they are of little value. The floors can be kept painted, but the expense of this must amount to quite a little. No film as thin as the average coat of paint will permanently resist the usual wear of the shop. It is claimed that a boiled linseed oil, thinned with gasoline or naphtha until it runs into the pores of a porous surface, oftentimes prevents trouble and is cheaper than some of the floor paints. This preparation is incidentally a good waterproofing for porous surfaces as well as a preventive of dust.

In the matter of repairs, the granolithic surface is obviously at a disadvantage compared with wood, because of the difficulty of firmly bonding new material to the old.

The difficulty of attaching machines to the concrete floor is probably overrated by those who have had no experience in this line. Many of the later types of machine tools are so heavy, so well designed and so self-contained that they require very little, if any, attaching or bolting to the floor, and therefore the drilling for plugs into which screws can be driven, or the use of expansion bolts, should be a comparatively simple matter, and this point should not claim much consideration.

The breakage of parts in process is something that must be considered individually. If manufactured articles are delicate and finished all over there is risk of serious injury to them in dropping on the floor, which would not be the case with a wood floor. Therefore, if the article being manufactured is fragile the wood floor is quite desirable.

With regard to cleanliness, there is not much question that the concrete floor can be kept cleaner than the wood floor, which has so many cracks, usually full of dirt. What dirt accumulates on the concrete floor is right on the surface and can much more readily be taken up.

With reference to waterproof granolithic floors, experts say that they must be troweled hard to make the surface durable, and that this troweling also makes it practically waterproof. There will be no leakage of water that may get into the surface, except at joints, and possibly in places that have been worn by use. The extent of damage would be simply whatever was done by the leaking water in the room below. The conclusion is that the highest success in the construction of a

granolithic floor surface can be obtained only by following very carefully correct principles of construction and certain methods of manipulation.

There are certain situations where, in spite of its higher cost, the wood top floor is probably better than any granolithic surface for the owner to put in, simply because his case may require certain qualities which the wood top can provide, and which no masonry surface can give, and which he must have, even at a higher first cost.

The virtues of a wood floor are inherent in naturally formed material whose fitness is apparent at a glance. Saw up the tree, season the sawed and planed strips, let the carpenter make them into a floor, and you have a wearing surface of certain high and recognized value.

With the granolithic surface, it is necessary to select cement and other materials for certain qualities which are not evident in the appearance of these materials; correct proportions must be determined; materials must be put on the right kind of surface and at the right time and they must be manipulated in the right manner. The green surface must be protected for a certain number of days while it is setting. The mere statement of the procedure necessary with the granolithic finish is enough to show that the average granolithic floor will be more or less unsatisfactory, because the average concrete workman is inclined to hurry, and is often poorly informed as to the procedure necessary for getting a good surface, and for that reason, to a large extent, the success or failure of a granolithic surface comes down to the question of workmanship.

There is one other feature which is often overlooked concerning concrete floors and wood tops, and that is the comparative thickness that is necessary for the two kinds. When concrete alone is to be used, the entire thickness of the slab, including that portion which is put on for the finish, if properly handled, can be bonded together and made to give strength as a single slab carrying no dead weight. With the concrete floor made with a wood top, the concrete slab should be just as thick as in the first case, but, in addition to its own weight, it has the weight of the screeds which are put on, also the weight of the cinder or concrete filling between the screeds, and not forming structurally a part of the floor slab; also the weight of the planking in the upper floor, together with ⅞-in. maple top floor, which all together reach a much higher total figure than might be supposed by anyone who has not gone into the engineering side of the matter

If 6 or 8 in. concrete slabs were sufficient to support the load of any given floor, provided it was of concrete, a slab thicker than this would really be required when it was to be covered with a top flooring of wood, and the accompanying screeds and tar concrete necessary in this other type of construction. This, of course, adds to the expense and to the time required for putting in the floor, because the concrete should be thoroughly dried before anything is done with the wood floor above it. Ample time must be given to dry the slab out thoroughly before the kiln-dried stock is put in place, else the floor will swell, curl and make trouble.

If, when the slab is still damp, waterproof paper is laid between the under flooring and the top flooring, it is almost certain to cause dry rot in the under flooring and the screeds and make trouble later on.

In accordance with the suggestions made in some of the letters that I have received, it seems as though a very desirable floor can be made by using a concrete base, afterward covered with a thin layer of pitch or tar concrete, in which screeds are set and carefully leveled up, then filled between with soft concrete leveled off flush with the top of the screeds; on this put at least 2-in. or, better still, 3-in. plank running crosswise with the building and covered finally with ⅞-in square edge boards, preferably tongued and grooved at the ends for the finished flooring. This gives the advantage of concrete so far as the foundation is concerned; it gives the waterproofing and preservative qualities of the pitch and tar concrete, and the advantages of wooden top floors, which, while costing a little more in the beginning, will probably, in 90 cases out of 100, be found more satisfactory in the end.

With reference to the relative cost per square foot for different types of flooring, I would say that, owing to the limited time allowed for the paper, I shall not be able to go into this part of the subject, and also for the further reason that these costs would vary considerably in different localities, according to the relative prices of the materials at such points. In a general way it might be said that the finished granolithic floor would cost around 25 to 30 cents per square foot, and a concrete floor with wood top covering, as suggested above, would figure 12 to 14 cents additional.

The Museum Idea in a Modern Educational System

(Continued from page 335)

with labels and descriptive cards,—such an institution would be also a valuable asset for the city's business interests.

Then, if with this industrial museum we combine the commercial feature, with ever extending means of information of every kind concerning the world-wide market for Worcester's manifold products, what an incentive we should have for teaching commercial geography and many other practical subjects in the schools, and what a resource for the business man, and what a profitable resort for the whole community in leisure hours, and what a promoter of our social welfare in other ways and to an extent we can hardly realize till we try it. Only the other day librarians were discussing in Boston the wisdom of having a commercial branch of the Public Library somewhere downtown, within easy access of the business interests,—a branch with some of the features of the Foreign Trade Bureau at Philadelphia. It would seem wiser to adapt and adopt the Philadelphia idea and start a museum, even in a small way, and upon the collections build the information and reference departments as rapidly as possible, working in co-operation with the library, but under a different organization. Otherwise the library system would become far too complex.

For the present such a museum as is here suggested could hardly hope to come under municipal control. Private philanthropy and business enterprise would best initiate and outline and carry it on till its large place in the social system is recognized and established. The St. Gall Industrial Museum, whose great influence in developing a thriving industrial community has already been suggested owes its origin to the initiative of progressive business men. Is it not high time for the Heart of the Commonwealth to begin to beat more quickly under the stimulus of a new and large opportunity for its industrial enterprise and its practical philanthropy to exercise itself?

Editorial Comment

New England Unity—and Lack of It

FROM time to time in the past three years, there have been various efforts made to crystallize the sentiment in favor of a united and aggressive and progressive New England. The Boston Chamber of Commerce led off in this work, closely followed by the Pilgrim Publicity Association, both of them organizations having their inception in Boston and necessarily embodying the Boston point of view.

Sincere attempts have undoubtedly been made by both these organizations to unify and make potential New England's well-known varied attractions, from an industrial, mercantile and scenic standpoint. It is no more than the truth, however, that striking success has not attended the endeavor to yoke the six New England states up into one set of harness with Boston men holding the goad.

There is, in spite of all the oratory that has been displayed on the subject, a lamentable lack of cohesion between Maine and Connecticut, between Rhode Island and New Hampshire. The people of Vermont feel as remote from the people of Connecticut as they do from the people of Oregon, and have but little more sympathy with their ongoings and their achievements. The sympathy, the unison of effort, the team work that characterize the Northwest, for example, in going after what it wants and getting it, is still deficient, if not wholly absent, from our New England life.

There are many reasons for this. Although the South is thought to be the hotbed of the state's rights theory, the native stock in the six New England states thinks along state lines and state lines only, just as firmly as do the men of South Carolina and Mississippi. The residents of New Hampshire are not at all in sympathy with the people of Vermont and will not act with them, save in an emergency in which the interests of both states are jointly threatened from the same source.

Massachusetts, by reason of her greater wealth and population than any other New England state, feels that she ought to lead off in any new development of our resources, but it is a question whether her leadership is more admired than distrusted.

Certain it is that any attempt at dictation will be momentarily resented and the people of Boston must take that fact into consideration when they outline any programme that calls for co-operation from the rest of New England.

Another factor contributing to division and to the narrowing of our influence is the fact that New England, while but one section geographically, is actually three sections, commercially speaking. There is the Boston section with Boston as port of entry and export. This comprises eastern Massachusetts, Maine, New Hampshire, eastern and southeastern Vermont; the Providence section, comprising the entire State of Rhode Island and some portions of southern Massachusetts, and the New York section, comprising entire western Massachusetts, western and southwestern Vermont, and the State of Connecticut. Burlington, Vt., has a much keener interest in the political and commercial welfare of New York than it has in that of Boston, and Hartford and New Haven, Bridgeport and Norwich are so closely identified with New York that to all intents and purposes, they might as well be located in the Empire State.

There is undoubtedly a more or less widespread desire on the part of the commercial organizations of New England to get together; but the difficulty is now, and it is as great as it has ever been in our history, to find some common ground on which we can all stand.

No man has yet arisen big enough to formulate a programme or build a platform on which all of New England could agree, or upon which Boston, Providence and New Haven, for example, could stand at the same time.

Co-operation is still to a very large extent here the poet's dream. Our people, as a whole, have for so many years individualized that they find it difficult if not impossible to work together. If the Boston Chamber of Commerce could convince the people of New England that it was laboring as whole-heartedly for their interests as it is for its own, it would perhaps break down the middle wall of partition, but it has not yet succeeded in doing so. Another effort in that direction is being inaugurated as we go to press, and it is hoped that it will be more successful than any of its predecessors, but if it is to accomplish anything it will be through concession and compromise and "sweet reasonableness" rather than through coercion, manipulation and supremacy.

It is time that New England acted as a unit in all commercial matters of consequence, and that it selected some city as a spokesman, as the middle West, for example, has selected Chicago. With the transportation facilities in this section narrowed down to two great lines, it is necessary as never before for the business men of New England to combine their energies and to act as a unit in preserving the privileges they have enjoyed for so many years. They must meet in the future the most gigantic combinations of capital known to man, and in order to do business with them on anything like equal terms they must confront them with aggregations almost equally wealthy, equally alert, and equally determined to maintain their rights.

There is not now, and there never has been, absolute unity between the different sections of New England. The agencies that are anxious to exploit New England have always taken advantage of that fact, and have played off city against city, state against state, arousing petty but costly jealousies in order to gain their own ends. It is high time that this particular war was brought to an end. As a section, we have not profited greatly from division. Would it not be well for us to make an actuality of our boasted love for New England and act together hereafter in the things that go to make this section of the country wealthy, intelligent and free?

A Baptism in Civic Pride

It is said that J. Pierpont Morgan is a "Bull on America," and it would be highly advantageous to Worcester if every financial magnate in this city would take a leaf out of his notebook and become a "bull on Worcester." In conversation with an engine builder with a thorough acquaintance with natural conditions in that particular line of manufacturing, he stated to the editor of the Worcester Magazine that no city in the country possessed a more efficient class of workmen than were in the shops of Worcester. This was not a mere generalization on his part, but was the outcome of a scien-

tific comparison carried on for many months, during which time he obtained specific information from the leading machine tool builders of the country as to costs of construction in their respective communities and shops.

High grade labor has found in Worcester remuneration and constant employment now for practically three generations. Father and son have labored with increasingly productive effort to make a better and better grade of goods in every line. The result is that we have built up here a coterie of skilled mechanics second to none in the world, and they are turning out today a finished product of finer type than can possibly be produced by labor less skilled anywhere.

We have not only the men and the money necessary to transmute the raw material into a finished product of the most delicate and durable type, but we have here a civilization that is as superior to that of the mining towns of Pennsylvania, the cotton fields of the South, or the lumber camps of the Northwest as Paris, France, is to Cripple Creek.

Surrounded by every advantage that can possibly be imagined in a community boasting three colleges, a university and a great engineering school, with churches and libraries and theatres of the first class, an ordered and a peaceful civic life, there is no reason why Worcester should not grow faster in the next ten years than it has in the last.

A large real estate operator in the neighboring city of Boston, who is engaged in putting through here a building proposition involving an outlay of half a million dollars, said recently to the Secretary of the Worcester Board of Trade that no city in New England has a brighter outlook from a real estate standpoint. Said he: "There is an abundance of money in Boston available for the development of Worcester real estate of the right type. The people of Boston believe that Worcester has a great future, and a man owning real estate in this city is very fortunate."

It is time that our people looked in the municipal glass and saw themselves as they actually are—a city of peerless resources with a future whose greatness is still unguessed by the wisest and most far-seeing among us.

What Worcester needs more than anything else today is a baptism in civic pride. Scores of American communities with one tenth of our assets in wealth, history and inventive genius have filled the unwilling air so full of clamor about their municipal greatness that they have finally convinced us, as well as themselves, that their assertions about their superiority are true. If Worcester would consider her own greatness a little more and their greatness a little less, she would grow much faster and they would not grow quite so fast, for the money and men we now send away would be kept here at home, where they could be much more profitably employed than they can ever be anywhere else.

Contempt for Law

No more disquieting evidence that the times are out of joint is afforded the student of public affairs than the contempt for law that has come to characterize the American people. Perhaps contempt in this connection is both too strong and too weak a word. In some instances, notably in the attempted destruction of the Los Angeles Times and the recent explosions in connection with the grade crossing work in this city, contempt is too weak a word. In both of these cases the parties responsible for the outrages absolutely defied the laws of both God and man, and with malice aforethought, deliberately committed a deed calculated to hurl into eternity, unshriven, scores of hapless and innocent souls.

But there is another class of men who have not gone so far as to commit murder in their hearts who are plainly restive under the restraints of the law. This class is even more culpable than the other, because in its ranks are found more than one man of eminence, more than one man whose position is such in society that other and humbler men are likely to pattern their lives on the model he sets them.

As justification for their attitude in contempt of the law, these men have not hesitated to cite the Dred Scott decision, little reckoning apparently what followed the appeal from that decision. The mob, however, are perfectly competent to draw their own conclusions and they draw them with the swiftness of light. When the subject is an attack on the Supreme Court the predicate can be found in Los Angeles, in Columbus, in Worcester and in Jersey City.

In our own State the justices of the Superior Court have recently had their lives threatened should they dare to enforce the law against striking workmen in the neighboring city of Boston.

The most astonishing thing with reference to the conservation problem that is now agitating the Union is the attitude of the great West. It absolutely resents the laws framed to preserve the great sources of wealth, the mines, the forests and the water powers of that section to our children's children, and we have heard even eminent divines from the Pacific slope gravely argue that the law conserving these raw materials ought not to be obeyed *because it was framed in the interest of the East.*

When the clergy as well as the laity are found engaged in an attempt to discredit law because it is unpopular in their immediate vicinity, although confessedly beneficial and highly desirable to the nation as a whole, one is led to wonder what the end of all this agitation will be.

Some of the far Western legislatures have been practically shorn of all their powers: the laws that are proposed are passed along to the voters as a whole for their approval or rejection. The law prescribing that beds shall have sheets eight feet long and the law abolishing capital punishment are both submitted to the same tribunal, and each is treated with equal flippancy.

The genius of all law from Sinai to the 61st Congress is two-fold—its solemnity and its permanency. The Ten Commandments, notwithstanding the fact that they are the hardest things in the world for us to live up to sacredly and purposefully, have never been abrogated, and never will be. Every man-made law that has ever been ordained has borne hardly, and in many cases cruelly, upon somebody. Generally the enforcement of any statute can be relied upon to punish the innocent even more than it does the guilty, and yet so essential is it that this should be a government of laws and not of men, that every patriot from Washington to Taft has impressed upon our democracy the eternal truth that along the rugged pathway of obedience to law and not along the pathways of caprice and passion and self-interest lies the road to liberty.

Building Operations for Sept., '09 and '10

City	Cost, Sept., 1910	Cost, Sept., 1909	Per Cent. Gain	Per Cent. Loss
Atlanta	$334,728	$439,791		23
Birmingham	190,729	143,928	32	
Chicago	8,427,700	7,720,500	9	
Cincinnati	560,295	643,450		12
Cleveland	1,618,817	814,405	98	
Dallas	206,675	215,143		3
Denver	1,082,980	869,490	24	
Detroit	1,387,615	1,078,970	28	
Duluth	164,790	291,125		43
Grand Rapids	155,187	151,855	2	
Hartford	390,350	328,555	18	
Indianapolis	460,313	712,555		35
Kansas City	732,800	1,021,345		28
Knoxville	318,363	85,750	271	
Little Rock	86,990	162,210		46
Los Angeles	1,652,790	1,375,909	20	
Manchester	177,750	65,150	172	
Milwaukee	797,912	972,490		17
Minneapolis	1,170,305	1,125,980	3	
Nashville	93,214	100,876		7
Newark	663,867	751,696		11
New Haven	270,990	201,130	34	
New Orleans	209,923	596,386		64
New York	10,745,905	12,464,293		13
Oakland	497,836	367,820	35	
Oklahoma City	213,864	321,675		33
Omaha	1,202,470	511,275	131	
Paterson	124,079	135,597		8
Philadelphia	3,283,915	2,734,540	20	
Pittsburg	835,800	1,996,261		8
Portland, Ore	1,391,260	1,288,300	1	
Rochester	842,439	814,889	1	
St. Paul	664,768	1,036,716		35
St. Louis	1,147,429	1,784,459		35
Scranton	140,910	197,097		28
Seattle	1,849,395	1,740,390	6	
Spokane	428,760	1,667,277		74
Toledo	407,743	340,927	19	
Wilkesbarre	270,105	295,888		28
Worcester	459,140	170,467	168	

Worcester Quotations

Furnished by Thompson, Towle & Company

Worcester, Mass., November 21, 1910

BANKS.

	Bid.	Asked.
Mechanics National Bank	160	
Merchants National Bank	170	
Worcester National Bank	210	
Worcester Trust Company	325	

RAILROAD STOCKS

	Bid.	Asked.
Boston & Albany	222	last sale
Boston & Maine common	127	last sale
Boston & Worcester Elec. common		10
Boston & Worcester Elec. pfd	40	41
Fitchburg preferred	131	last sale
New England Inv. & Sec. pfd	91½	& int.
New York, New Haven & Hartford	153½	last sale
Norwich & Worcester	212	last sale
Providence & Worcester	260	last sale
Worcester, Nashua & Rochester	144½	last sale
Worcester Railways & Investment	77	

INDUSTRIAL STOCKS.

	Bid.	Asked.
Crompton & Knowles pfd	150	
Denholm & McKay common	200	
Denholm & McKay pfd		103
Graton & Knight Mfg. common	130	
Royal Worcester Corset Co.	110	115
United States Envelope common	52	54
United States Envelope pfd	110	112
Worcester Gas Light	280	
Worcester Electric Light	285	
Wright Wire Company common	102	
Wright Wire Company pfd	100	110

BONDS.

	Bid.	Asked.
Amer. Writing Paper 1st 5's	88	last sale
Boston & Worcester St. Ry. 1st 4½'s	97½	last sale
Crompton & Knowles 1st 6's	4½	basis
Crompton & Knowles deb. 6's	5%	basis
Marlboro & Westboro St. Ry. 1st 5's		90
Norcross Brothers 1st 6's	100	101
United States Envelope 1st 5's	100	102
Worcester Cons. St. Ry. 1st 4½'s		101
Worcester & Marlboro St. Ry. 1st 5's	97	
Worcester & Southbridge St. Ry. 1st 4½'s	85	87

Current Events

General

Oct. 21 Worcester County Clark College Alumni Association is formed.

22. Worcester Auditorium completed and opened for public use.

23. Alfred L. Aiken, president of the Worcester County Institution for Savings, elected vice-president of the savings bank branch of the American Bankers' Association.

25. Hollis W. Cobb resigns as special justice of Central District Court.

26. New Elks' Home at Elm and Chestnut streets dedicated.

Nov. 1. Imports through port of Worcester for month of October total 2166 packages, value $72,331, duty $17,563

1. Post office receipts for October, 1910, $37,929.59, an increase of $1726.01 over $36,203.58 in October, 1909.

3. Winfred H. Whiting nominated by Governor Draper to be special justice of Central District Court.

4. Annual meeting of Worcester County Teachers' Association attended by 1800 members.

7. New England Corn Exposition opens at grounds of Worcester Agricultural Society.

8. John Alden Thayer elected Congressman to represent third district.

9. Governor Weeks of Connecticut and Governor Quinby of New Hampshire speak at New England Corn Exposition.

10 National Bank Cashiers' Association of Massachusetts hold special meeting in Worcester

Necrology

Nov. 18. Augustus S. Gates, 17 years a Worcester building contractor, of heart disease, in his home, 81 Florence Street, 76 years and 26 days old.

City Hall

Oct. 21. Excise tax due city from street railways is $20,835.37, as compared with $19,484.12 in 1909.

25. Street Commissioner George C. Moss resigns.

27. Franchise taxes on street railways levied by the Commonwealth give Worcester $62,648.55.

28. Building statistics in Worcester for first ten months of 1910 (houses 417, families 1034) exceed the record of the twelve months of any previous year.

Nov. 2. William E. Mills, one time city engineer and for 40 years connected with city engineering department, resigns at age of 85 years.

15. City Treasurer Clinton receives check for $110,795.02, balance due city from the State Treasurer.

Industrial

Oct. 24. Permit issued for erection of a transformer station, at cost of $30,000, for Worcester Consolidated Street Railway Co., J. W. Bishop Co. to build.

25. Stockholders of Worcester Electric Light Co. re-elect present directors, treasurer and clerk.

27. Ground broken for $60,000 building at Assumptionist College, Urgel Dorais to build.

31. Norcross Bros. Co. awarded contract for erection of Rotch and Evans memorial libraries, Boston, each to cost $100,000.

Nov. 2. Corporation formed to take over business of late Charles C. Fuller, under name of Fuller Regalia & Costume Co.

2. Health Book Publishing Co., John F. Armstrong, president, and Dr. Melvin G. Overlock, treasurer, formed under Massachusetts laws with capitalization of $12,000.

WORCESTER BOARD OF TRADE
EACH FOR ALL ALL FOR EACH
11 FOSTER STREET
WORCESTER MASSACHUSETTS
USA

Officers.

President, CHARLES T. TATMAN. *Vice-President*, EDWARD M. WOODWARD.
Secretary, HERBERT N. DAVISON. *Treasurer*, ALBERT L. STRATTON.

Directors.

CHARLES PERKINS ADAMS, ARTHUR O. YOUNG, CLINTON S. MARSHALL,
DANIEL E. DENNY, JOHN J. POWER, HERBERT H. FAIRBANKS,
FRANKLIN B. DURFEE, EDWARD J. CROSS, WILLIAM WOODWARD,
S. FOSTER H. GOODWIN, CHARLES E. HILDRETH, LOUIS H. BUCKLEY,
ALBERT H. INMAN, CHARLES T. TATMAN, ARTHUR C. COMINS,
VICTOR E. EDWARDS, CHARLES L. GATES, MARCUS L. FOSTER,
ARTHUR W. PARMELEE, EDWARD M. WOODWARD.
Clerk of the Corporation, DANA M. DUSTAN. *Auditor*, E. BRUCE DUNN

Executive Committee.

EDWARD M. WOODWARD, DANIEL E. DENNY,
LOUIS H. BUCKLEY, ALBERT H. INMAN,
CHARLES T. TATMAN, *ex-officio.*

Membership Committee.

HARTLEY W. BARTLETT, *Chairman.*
HERBERT L. ADAMS, DONALD B. LOGAN,
MAURICE L. KATZ, BENJAMIN B. SNOW.

Committee Chairmen.

Advisory: RUFUS B. FOWLER.
Agriculture: J. LEWIS ELLSWORTH.
Arbitration: ALBERT H. INMAN.
Banquet: ARTHUR C. COMINS.
Building Laws: EDWARD J. CROSS.
Education: CHARLES P. ADAMS.
Foreign Trade: VICTOR E. EDWARDS.
Insurance and Fire Protection: JOHN J. POWER.
Legislation: DANIEL E. DENNY.
Manufactures: CLINTON S. MARSHALL.
Meetings and Receptions: HENRY A. MACGOWAN.
Mercantile Affairs: ARTHUR O. YOUNG.
Municipal Affairs: ——
New Enterprises: FRANKLIN B. DURFEE.
Publication: GEORGE F. BOOTH.
Public Health: S. FOSTER H. GOODWIN.
Statistics and Information: MARCUS L. FOSTER.
Taxation: CHARLES E. HILDRETH.
Transportation and Railroads: EDWARD M. WOODWARD

November in Board of Trade

A Busy Month—Resolutions Adopted by Directors on Death of Late Charles L. Gates—Texas Trade Possibilities

The activities of the Worcester Board of Trade during the past month have been as multifarious as ever, and have ranged from the investigations incident to a concern that wanted to locate here for the purpose of building flying machines to an inquiry from a Colorado man who had heard of a product once manufactured in Worcester to take steam off eyeglasses.

At the regular November meeting, Vice-president Edward M. Woodward presiding, there were present Messrs. Charles E. Hildreth, Edward J. Cross, Ernest P. Bennett, Arthur O. Young, William Woodward Arthur C. Comins, Daniel E. Denny, Franklin B. Durfee and Albert H. Inman of the Board of Directors.

The following resolutions on the death of Charles L. Gates, a director of this Board, offered by the President, Mr. Charles T. Tatman, were read and ordered spread upon the records:

"Whereas, our valued friend and associate, Charles L. Gates, passed out from this life on the fifth day of September, 1910,

"Be it resolved by the Board of Directors of the Worcester Board of Trade that this organization, feeling keenly its loss in the death of so active, able and loyal a member, hereby records its sorrow in this sad event and its cordial appreciation of the great worth of Mr. Gates as a man of integrity and ability, a citizen ever mindful and active in matters pertaining to the welfare of this community, and a member and officer of the Worcester Board of Trade, always loyal, clear-sighted and courageous."

The matter of holding a concert under the auspices of the Board by the Glee Club this winter was broached in a letter from the President of the Glee Club, F. A. Bancroft, and the Directors voted to endorse the proposition, the understanding being that the Board shall incur no obligation therewith and shall receive no revenue therefrom, whatever money the boys make going to them. It is understood that the Glee Club has it in mind to purchase a piano for its own use.

A lengthy communication was received from the Boston Chamber of Commerce in the form of a report presented by Hon. Robert Rantoul advocating the inauguration of a line of steamers plying between Boston and Texan ports and soliciting the support of Worcester manufacturers for the scheme. The report was accompanied by a letter from the President, Bernard J. Rothwell, to the President of this Board, and it was on motion of Mr. William Woodward—

Voted, that the Worcester Board of Trade co-operate with the Boston Chamber of Commerce in any plan that they may devise for the development of any new steamship lines between Boston and Texan ports.

The Secretary was instructed to obtain all further information possible with reference to this matter and communicate the same to the Committee on Transportation and Railroads of this Board. It was voted to endorse the work of the American Embassy Association, and the President has been selected as the representative from this organization to that body.

Prof. U. Waldo Cutler was appointed a delegate from this Board to the Conference on Vocational Guidance at Boston; and the power to appoint delegates to the annual convention of the American Civic Association at Washington, December 14th to 16th; to the National Rivers and Harbors Convention at Washington, December 7th to 9th, and to the commercial excursion to the Hawaiian Islands by the Seattle Chamber of Commerce, leaving Seattle February 2d, 1911, was left to the President.

A communication was received from Edna R. Thayer, expressing appreciation of $5, contribution from this Board to the school garden fund, and an invitation from the National Museum of Safety and Sanitation to attend the exercises in connection with the opening of its New York Museum was laid on the table.

Reports were made on the South Worcester Station matter, where an effort is being made to retain the station abolished by the decree of the courts eliminating grade crossings at that point, and another on the status of the effort that is being made to conserve Washington Square.

Adjournment followed.

Gratifying Outlook for 1911

With Great Crops, a Prompt Prospective Settlement of the Vexatious Freight Rate Case and Long Delayed Buying on the Part of the Railroads, the Business Future of the Country is Most Promising

The great struggle that is now going on all over the East to preserve business conditions as near as possible at normal levels shows signs of approaching a successful and speedy conclusion.

Ever since the middle of last summer there has been a slackening in trade and a hardening in money that has seriously affected the purchasing power of every manufacturer and business man. It has not only affected the inclination to buy, but it has actually affected the ability to buy. Banks have been, if possible, more con-

servative in their loans than at any time for two years, and there has been everywhere an obvious inclination to take in sail.

Worcester has not escaped this depression, but it can truly be said, thanks to our many-sided industrial life, that we have felt the slackening here as little as in any manufacturing city in this country. A report made to the State Bureau of Labor at the close of last month showed only a fraction over 4 per cent. of our workmen idle.

It will be gratifying news to all our readers and to manufacturers generally to learn that the indications are for much better business after the first of the year than we have had for many months. This information comes from high financial authority in New York and is believed to be based on sound premises.

One thing that has operated to make all producers cautious has been the threat of additional tariff legislation. The Eastern manufacturer has not been averse to having the tariff revised by piecemeal, especially if his own particular schedule went untouched, but all the schedules are so inter-related that he could not see how any of them could be tinkered without his being affected. The recent elections have made it evident that the Republican party will not revise the tariff, and the opportunity to effect a revision has evidently had a sobering effect upon their opponents, so that it now looks as if there would be no change in the Payne-Aldrich schedules until after the November elections in 1912, which means that nothing will be done in that direction—unless an extraordinary session of Congress should be called—until December, 1913. This means that the manufacturer is to have two years certainly, and perhaps three, of settled conditions as far as the tariff is concerned.

From an agricultural standpoint the country is in absolutely healthy condition. Speaking of this matter a leading Chicago banker says, "I think few, if any, will agree that the country is on the verge of hard times. The huge crops have insured prosperity. I don't believe there has even been a time when the people of the United States were better off, materially and morally, than they are now."

Furthermore great crops insure extensive feeding of live stock and a fair volume of traffic throughout the winter, even though general business recedes a good deal further than it has. Fairly active employment of money is also assured indefinitely, even though only a small fraction of the promised investment in securities is realized. There is every indication of an active year of general building, even though the railroads do not buy more steel than they now intimate.

Wage advances and provision declines mean a larger share of wealth for the laboring classes and consumers generally, allowing that the economic tension does not reach the breaking point.

The railroads which have been clamoring for a much larger share of the wealth of the country than their relative importance warrants are now taking a more conservative tone, Arthur E. Stillman, president of the Kansas City, Mexico & Orient Railway, admitting that he will be satisfied with a five per cent. increase in freight rates.

If the manufacturers of the East can be assured that an advance of not more than 10 per cent. will be ordered by the Interstate Commission, they will be cured of their alarm and will begin active operations once more. It is now asserted that the Commission will render its decision one way or the other Jan. 15, and if that should prove to be true and an advance of not more than 10 per cent. ordered, the whole industrial fabric of the nation will respond immediately. The railroads themselves, always large buyers, have bought very little during the last few months, and their purchases, once the rates are fixed, will be another contributing factor towards increased production and an easier money market.

That the railroads ought not to be too greedy is evidenced by facts in the possession of the Interstate Commerce Commission showing that the net operating revenue of all the lines in the country for the year ending June 30, 1910, was $938,111,109 against $827,814,989 for the year ending June 30, 1909, or an increase of $110,296,120, a trifle over 13 per cent. Virtually all the wage increases in the railroads were in effect before June 30.

The transcontinental lines are now talking about an increase of 25 per cent. in class rates on transcontinental hauls, but it is believed that the Panama canal and competing waterway competition will take care of this matter eventually, although the East may have to suffer temporarily from such an arbitrary increase.

As a whole the outlook is very bright for much more stable conditions by next spring at the latest, and the manufacturers who have waited longest and suffered most from the prevailing unrest and threatened economic revolution can take heart of grace at the prospect.

Worcester has suffered as little as any manufacturing city in this country from the prevailing commercial malaria and ought therefore to respond to the improvement that is coming quicker than any of her competitors.

An Interesting Consular Circular

The following abstracts from a circular letter sent to this Magazine by the American Consul at Malaga, Spain, are pregnant with suggestions that will interest exporters:

In addition to general commercial information referring to possible trade openings, this consulate is ready to furnish, through the Department of State, reports on particular points as they relate to different classes of goods, in part as follows:

Local conditions and requirements, preferences and prejudices; demand of the market as to style and quality; how prices affect sales; the demand for goods and the competition in certain lines; the custom tariff of Spain and its effects on imports.

Methods employed by Continental exporters in establishing trade relations in this market; credits allowed; packing and labeling of goods; correspondence; weights and measures.

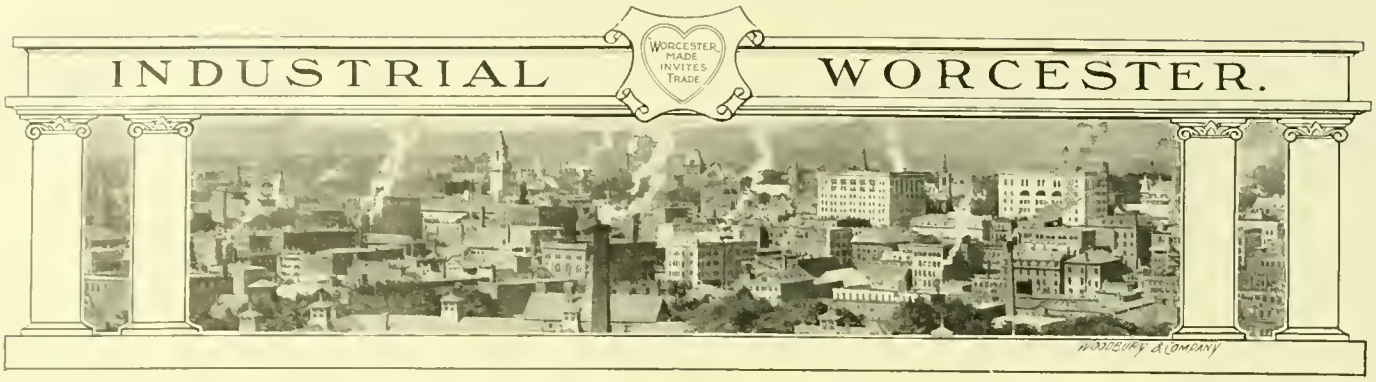
Salesmen: trade routes; hotel and traveling expenses; taxes and licenses; duties on samples.

Laws of Spain governing importation and sale of drugs or food products. Patent and trade marks laws. Existence of falsifications or imitations.

When initial shipments are made to merchants of this city, American exporters who have no resident representatives in Malaga will find it to their advantage to promptly advise the consulate giving the name and address of the consignee. In every possible case the customer will be visited and his opinion of the goods reported to the shipper, through the Department of State, together with suggestions as to improvements in manner of packing, shipping or invoicing, which might be of value to the exporter and aid in furthering his business interests in this consular district.

When American exporters, having no resident representative in Malaga, meet with difficulties or have trouble with shipments into this district, they are invited to advise the consulate. Many cases of disagreement with local importers, misunderstanding of custom house regulations or troublesome trade restrictions may be cleared up, explained or avoided through consular intervention or investigation. Every effort will be made to correct influences adverse to American trade development and to give specific advice regarding future shipments into this district.

The establishment of closer relations with the exporters of the United States will greatly increase the efficiency of the service which this consulate is called upon to render for the extension of American export trade. Your co-operation along the lines indicated will be welcomed. *American Consul.*



Worcester Warp Compressing Machine Company

The Worcester Warp Compressing Machine Co., 105 Exchange Street, is one of Worcester's fast developing industries. In 1893 David McTaggart was engaged in the business of manufacturing woolen goods in Fitchburg. Mr. McTaggart early realized the need of compressing the warp that more yarn might be placed upon the beam. After extensive experiments he built a machine of wood which produced a certain amount of compression. In the latter stages of its development, he was assisted by his son, David D. McTaggart, a graduate of Worcester Polytechnic Institute. The first machines were built in 1893 in the old Gilbert Loom Works on Union Street in this city. In 1895 the shop was moved to 91 Exchange Street.

In 1906 the elder McTaggart died and his son took up the task of perfecting the compressing machine, which was the pioneer of its kind.

David D. McTaggart entirely reconstructed the machine, making it of metal and greatly perfecting its operation. One improvement has followed fast upon the heels of another until today its use is revolutionizing many branches of the textile trade. The Worcester Warp Compressing Machine Co is now turning out a complete line of spooling, winding, dressing and beaming machinery for woolen, worsted, cotton, carpet and other woven goods.

During the past two years, Mr. McTaggart has designed and fully developed a machine known to the trade as the "Multiple Compressing and Inspecting Spooler" for winding worsted yarns from the spinner's bobbin, where a thorough examination of the yarn is imperative.

In the manufacturing of fine worsted cloth for men's wear and ladies' dress goods, defects in the yarn are the cause of great annoyance and argument between the manufacturer and the buyer, and has been the basis of many a lawsuit and broken business relations. In the past it has been the custom of the mill men to "doctor" the cloth in the finishing room in order to hide defective yarns, and cover up the bad places so as to pass muster in the commission house. The removal of defects from the cloth after it is woven is an expensive operation to the mills, besides leaving marks or holes in the goods which form the basis of claims and disputes.

Of late years owing to the extremely high prices of all materials and labor, also the advent of the automatic loom, manufacturers have been demanding the cheaper and surer method of eliminating all defects from the yarns before being woven, thereby producing more perfect cloth without resorting to a lot of expensive labor in "doctoring" the finished goods.

To meet this growing demand Mr. McTaggart conceived the idea of removing all the defects from the yarns while in the process of jack spooling, and has built a machine which, running at a low rate of speed, enables the operative to control a large number of threads, at the same time doing about 300 per cent. more work per day, with less effort, than was possible with the old system of single jack spooling, which consisted of one girl tending one jack spooler running at a high rate of speed on a very few ends, making it impossible to see anything but the most glaring defects in the yarns

This machine is designed to wind six jack spools simultaneously, each jack spool being arranged to hold from 40 to 48 threads, running at about 50 yards per minute; enabling a girl operator to do as much work per day as three girls when operating the old single spoolers, and at the same time she is able to see and remove all defects from the whole 240 threads while running. The defects found in worsted yarns are slubs, bad piecings, knots, hard and slack twists, singles and three plys, etc. A slub or bad piecing is a soft, untwistep place in the yarn where the roving has been joined or pieced together in spinning. Hard and slack twists are caused by some parts of the spinning machinery being a little out of order, which either allows the roving to run without sufficient resistance, thereby causing a soft place without enough turns of the twist per inch, or with too much resistance, which causes the yarn to take more than enough turns of the twist per inch. In yarns intended for men's wear the threads are generally made up of two fine threads twisted together, forming what is known in the textile mills as a two-ply thread. In twisting for these two-ply, very frequently one of the single threads will break and become attached to another single thread running to a different spindle and be carried along and twisted in with it; this makes a three-ply on one spindle, and leaves a single ply on the other, thus producing two pieces of defective yarn, which are especially to be guarded against getting into the goods, as a single or three-ply may run through many yards of cloth before being detected.

This Multiple Compressing and Inspecting Spooler consists of a frame equipped with a differential drive (slow motion and initial speeds) connected with a common shaft which operates by means of bevel gears, a set of six leather-covered driving drums one yard in circumference, each drum being equipped with brackets and guides for holding a jack spool, also a grooved steel compressing roll which acts as a guide for the threads and as a compressor at the same time. This steel compressing roll has V-shaped grooves cut into the surface, in such a manner that each groove vibrates the individual thread with a cam-like side motion, and forms them directly into an individual "cheese" by what is known as a positive, quick, cross-wind traverse, a patented feature which no other builder may employ. This spooler is also equipped with electrical stop-motion and slack end detectors, which ring a bell or stop the machine, as the case requires.

The screens or examining boards are placed in such positions and angles that the operator sitting in front of the machine sees the yarn traveling across these screens and towards her in such a manner that all defects are greatly magnified. These inspection screens are adjustable for height to suit the size of the operator. The drums are driven individually or collectively as desired, so that it is possible to wind different sizes and colors of yarns simultaneously.

This machine is still further equipped with open top gathering reeds and parting rolls, color rolls, and rough-surfaced tension rolls; which automatically separate the yarns for the various spools and carry all threads at an equal tension. This arrangement of reeds, rolls and dividers enables the operator to keep the threads in their separate and individual places without danger of becoming crossed or mixed.

The creel, which is situated at the back of the spooler, is extremely small and compact, occupying little floor space, with all working parts within easy reach of the average-sized girl. This creel is built entirely of steel angles and rods, with swinging stiles fitted with porcelain guides, and will hold 240 or 288 bobbins weighing five pounds each, giving a large supply of yarn from the spooler. The yarn is drawn from over the end without rotating the bobbin, thereby eliminating all tensions and back-winding, a most important feature. The threads pass through porcelain guides and are collected into an open-top comb at the back of the spooler, thence under a deflecting roll to the top, over another deflecting roll, and from there, at an easy incline, the yarn passes in front of the colored screen down to the front of the machine, over another smaller screen, which is set at the same angle as the yarn line and close to it. Here the yarn passes through another open-top comb, over a finished color roll and down to another larger roll, which has a roughened emery-covered surface, carrying all threads at an equal tension. The yarn is then carried through another comb, and a set of six dividing rolls, which separate the strands for each jack spool. From here the yarn passes to the electric stop-motions and down to the

compressing rolls, which wind the yarn onto the jack spools automatically, and the V-grooves in the surface of the compressing roll vibrate them backward and forward very quickly.

When the jack spools are full, the compressing rolls are raised and locked by means of hand-wheels and pawls. The full spools are then easily removed by means of an improved lifter, especially designed for this purpose; the empty spools are then substituted, and when the spooler is started, each thread finds its own groove automatically. This is another patented feature. This spooler has many valuable patents already granted, and many claims and amended claims pending.

Mr. McTaggart says: "To give an idea of the increased capacity of this machine over the former methods, it is sufficient to say, using 36's two-ply worsted yarns as an example, that where three girls running old-style single spoolers (standing up all day) could wind two spools of 40 pounds each per day, making a total of 240 pounds of yarn, one girl running the Multiple spooler can wind six spools of from 50 to 55 pounds each per day, making a total of 300 pounds to 330 pounds of yarn, at the same time she delivers her yarn clean from all defects, while the three girls on the single spoolers have been able to get out less than 10 per cent. of the defects, owing to the high rate of speed which they are compelled to run to get the required production.

"Furthermore, if the girls operating the single machines were obliged to deliver their yarns as clean as the yarn from the Multiple spoolers, they would be compelled to reduce the speed to about 40 yards per minute, instead of the 120 yards per minute at present, which would cut down their production so greatly that it would take at least seven girls to do the same amount of work that one girl now does on this Multiple compressing spooler.

"Mills using this Multiple spooler exclusively find that they can reduce their 'help' in the finishing room from 50 per cent. to 75 per cent. because the cloth now comes through so clean and free from imperfections, which enhances its value and reduces the chance of claims from commission houses and tailors."

In addition to the Multiple spooler, this firm builds a complete line of single drum compressing spoolers for woolens and cottons, also Royal Worsted spoolers for worsteds in all their variations; also a line of medium, heavy and extra-heavy chain beamers and slashers for cotton ducks, sail cloths and carpet fabrics, some of these machines weighing as high as 20 000 pounds when complete. Besides its regular line of warp compressors and beaming machinery it also builds a special warping outfit for all kinds of matting, rugs, carpet and jute fabrics.

Owing to the rapidly increasing demands for the new multiple-compressing spoolers and other products of this company, the company has grown very rapidly, and now occupies a new, commodious concrete building at 105 Exchange Street, which it has equipped throughout with the best of labor-saving tools, especially designed for its class of work. It reports that it has been busy all through the dull times and has plenty of orders ahead.

David D. McTaggart is sole owner and the present force of fifty men is to be increased at once to seventy.

Rockwood Sprinkler Company

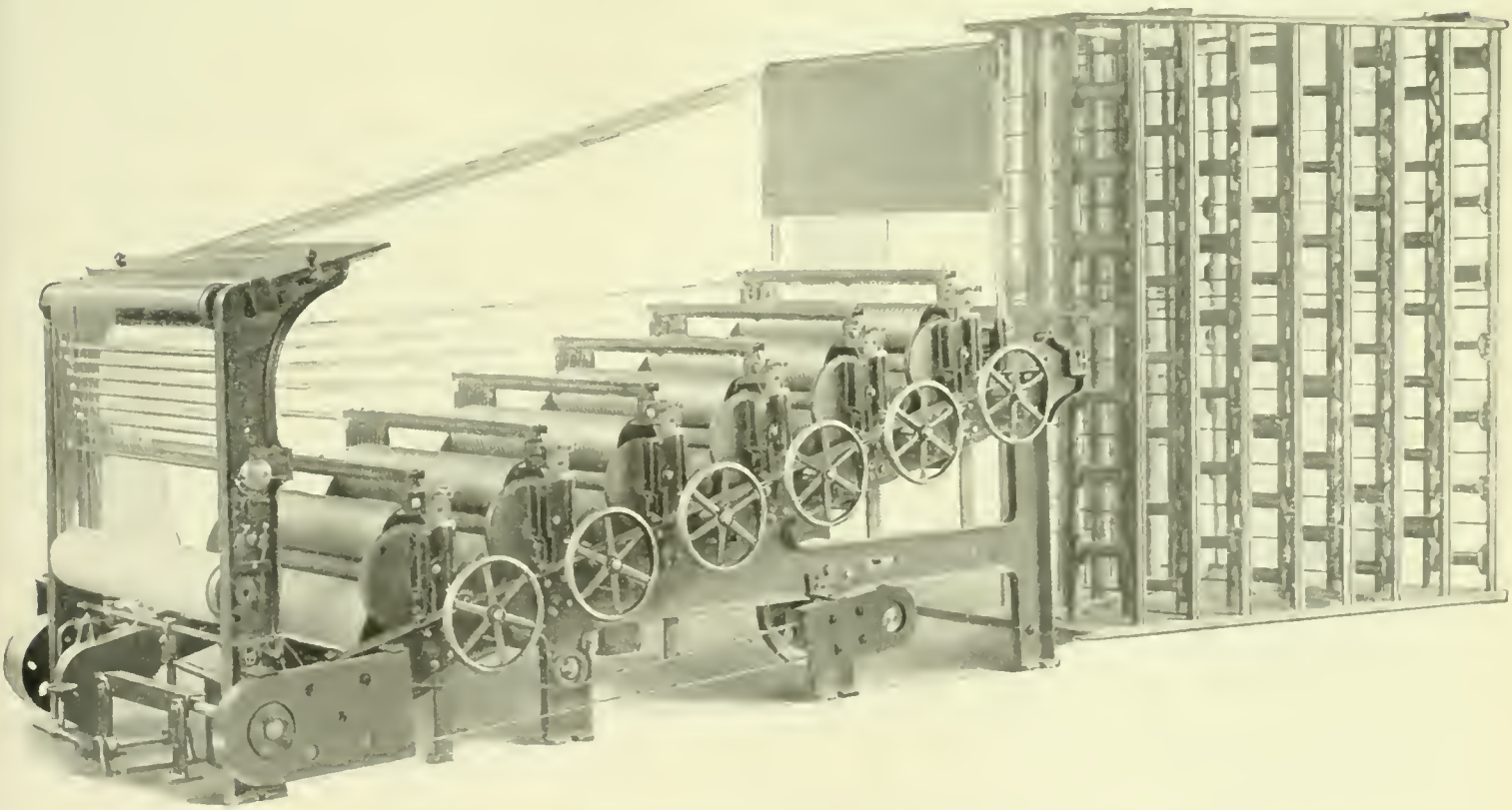
The Rockwood Sprinkler Company of Massachusetts has acquired the property on Harlow Street formerly occupied by the James H Whittle Company. Extensive changes and additions have been made and the plant in its present form furnishes an excellent factory for the growing business of its new owners.

The Rockwood Sprinkler Company of Massachusetts operates in New England, New York, New Jersey and Pennsylvania and is the parent company. Three subsidiary contracting companies cover the rest of the United States and Canada. The Rockwood Sprinkler Company in Chicago has a pipe cutting factory. The other two auxiliary companies are the Rockwood Sprinkler Company of Canada at Montreal and the Rockwood Sprinkler Company at Seattle.

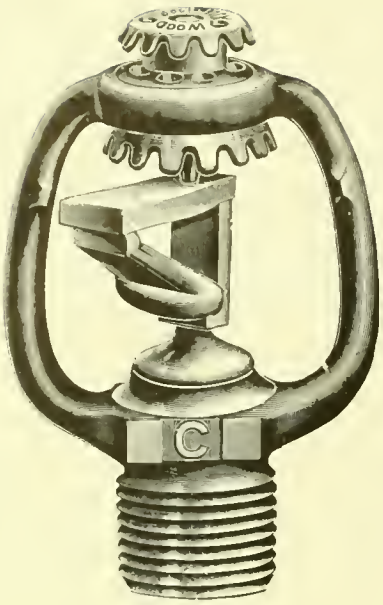
The parent company is incorporated under Massachusetts laws with an authorized capital of $60,000, with George I. Rockwood, president and treasurer; J. P. Ashey, vice-president, and H. W. Park, secretary.

It was founded by Mr. Rockwood and Mr. Ashey in 1906 for the manufacture and sale of automatic sprinklers and other apparatus invented by Mr. Rockwood. The first plant was in the buildings at the corner of Summer and Arch streets comprised in the Ichabod Washburn estate. Later a brick factory building was erected, alterations made in the building first occupied and neighboring property purchased.

The expansion of the business was rapid and the above mentioned subsidiary companies were formed. Offices were opened in every important city, the Massachusetts company operating large offices and installing forces in Boston and New York.



MULTIPLE COMPRESSING AND INSPECTING SPOOLER MADE BY WORCESTER WARP COMPRESSING MACHINE CO.



Rockwood Type "C" Sprinkler.

The pressing need of larger quarters brought about the purchase of the Whittle property, and the company now has a plant which includes a modern factory building 350 feet long, 60 feet wide and through its major portion three stories high, together with several auxiliary buildings. With the recent changes and additions, the plant is peculiarly well adapted to the needs of the company.

The press and stock rooms are on the first floor, with the pipe cutting shop and pipe storage in the rear portion. On the second floor are the private offices, the valve shop, the pipe fittings shop and tool and experiment rooms. On the third floor are the general offices, draughting room, sprinkler manufacturing department and testing laboratory. Several separate buildings provide accommodations for a blacksmith shop and the storage of fittings. A side-track from the Boston & Maine Railroad is to be built so that cars may be run into the interior of the factory and pipe unloaded directly into the storage bins.

The factory throughout is equipped with the most modern machine tools, presses and considerable special machinery devised to meet the unusual requirements of the company's special processes. Here are made automatic sprinklers, automatic alarm bells, automatic dry-pipe valves and a complete line of sprinkler pipe fittings and accessories. A full line of pipe cutting machinery is also installed, and this part alone of the company's business uses a carload each day of wrought-iron pipe and another carload of cast-iron pipe.

In this Worcester plant are made the automatic sprinkling devices used by all four companies, and the business of the Massachusetts company alone amounts to $1,500,000 yearly. The parent company employs about 325 hands and the subsidiary companies about 250.

Some of the recent contracts mentioned below show the magnitude of the business and the standing of the company's products in the structural world: A contract amounting to $350,000 for the installation of 40,000 sprinklers in the car barns of the New York street railways; 16,000 sprinklers in 34 buildings of the Jacob Dold Packing Company of Buffalo; 7,000 sprinklers in 25 buildings of the new plant of the New Home Sewing Machine Company, Orange, Mass.; 4,000 sprinklers in the storage warehouse of the Heywood Bros. & Wakefield Company, 34th Street, New York; 10,000 sprinklers in the twin Bryce-Hewitt buildings, Fourth Avenue, New York; and the Millbank and Braender buildings, each 22 stories, Fourth Avenue, New York.

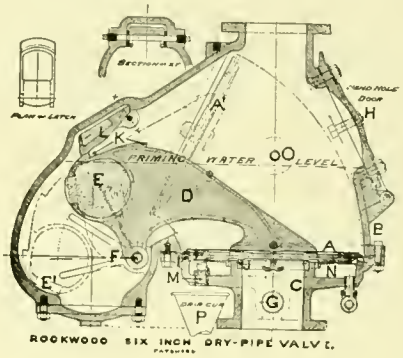
The skill of their workmen was notably shown in the installation of complete equipment in the Tiffany Studios of New York, where works of art to the value of several millions were in their usual positions, without the least damage or injury to any portion of the valuable stock. In this instance a striking example was offered of the efficiency of the Rockwood system of fire protection, as, three days after the workmen completed its installation, a fire occurred which was quickly extinguished by four of the sprinkler heads.

Thus does the product of Worcester genius and mechanical skill work to save the creations of others, and in numerous instances in every part of the country are the appliances of the Rockwood Company of Massachusetts doing their part in teaching the lesson that "in Worcester, we aim at excellence."

Fuller Regalia & Costume Co.

The Fuller Regalia & Costume Co., 654 Main Street, is the name of a new corporation which has taken over the long-established business conducted by the late C. C. Fuller. The new company expects to greatly develop the manufacturing end of the business.

Early in the 80's, Mr. Fuller, who was active in several lodges and societies, conceived the idea of providing something better than the old-fashioned bandage used for blindfolds in initiation



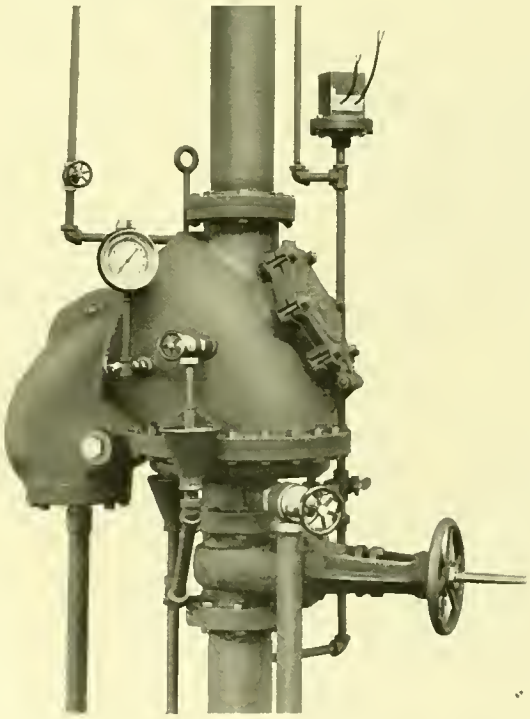
Interior of Rockwood Dry-pipe Valve.

work. He developed this idea, and in 1885 invented the Fuller hoodwink, which was duly patented, and is now in general use in initiation work all over the country.

Realizing that lodges and societies not only needed hoodwinks, but required regalias, badges, banners, robes, and other accessories, he started in the manufacturing of these specialties at what is now 377 Main Street.

From this humble beginning Mr. Fuller, who did business under the name of the Fuller Regalia & Costume Co., built up a big business and soon saw the need of adding costumes such as are used at masquerades, minstrel shows, plays, fancy dress balls, and lodge ritual work, to his stock. There is hardly a character in ancient or modern history but what this firm can costume correctly in every detail. With something like a thousand costumes of various characters in stock, practically all of which are the product of the firm's workroom, the wants of the trade can be well taken care of.

Fifteen years ago the company moved from 377 Main Street to 5 Pleasant Street, occupying a large portion of the second and third floors. The business of the firm, however, grew to such an extent that new and more commodious quarters had to be secured, and in



Rockwood Dry-pipe Valve.

1903 the firm moved into its present handsome store at 654 Main Street. The large workroom connected with the store is equipped with the latest power machines, operated by experienced help, and enables the company to take care of its ever increasing patronage, which comes, not only from New England, but also from western states.

Up to the time of Mr. Fuller's death in July of this year, the business was carried on by him as an individual. In October the business was incorporated under the name of Fuller Regalia & Costume Co., thus perpetuating the name, with the following as officers: Irwin P. Dorward, for the last seven years advertising manager of the Graton & Knight Manufacturing Company, president; John A. Sherman, treasurer and manager of the Sherman Envelope Company, treasurer; and J. Edward Sherman, of the Sherman Envelope Company, vice-president and clerk.

Mr. Irwin P. Dorward assumes the active management, and with the assistance of all the former employees, the business will be carried on along the same lines as before the incorporation. The company is doing a good business, and has orders booked which will keep the workroom busy for months to come.

A Boston office in charge of Mr. Austin S. Esty, who is a Past Grand Master of Odd Fellows, is a large factor in catering to the lodges and societies in Boston and vicinity.

W. & S. Manufacturing Co.

A change has been announced in the personnel of the W. & S. Manufacturing Company, Hunt Street. H. R. Sinclair, one of the parties in the concern, has become the sole owner, having bought out the interest of J. Fred Wilson in the business.

This firm, which was next to the oldest in the city in its line, was established in 1883 by Mr. Wilson in a shop on Hermon Street. Later George A. Smith bought an interest in it and the firm removed to a factory on Vine Street. In 1896 Mr. Sinclair succeeded Mr. Smith. The business of the concern showed a steady growth, and in 1905 new quarters became a necessity.

The present factory on Hunt Street was then built. This is of brick, two stories high, and 100 feet long by 50 feet wide. In this excellent plant is being carried on a successful business in metal stamping, die making, polishing and electro-plating. Since the factory was first built, much has been added in the way of new equipment and expert help, with the result that even through the recent dull times, the factory has been kept busy.

The W. & S. Manufacturing Company is prepared to make nearly every kind of metal specialty and does a constantly growing business in the line of piano hardware, automobile parts, and electrical stampings. A recent installation of presses enables it to produce pressed steel articles of great excellence. Its list of products is long and varied, and at this writing the plant is very busy.

Morgan Company Victories.

The clean sweep made by the Morgan five-ton truck in carrying off first prize—a beautiful silver cup—in the recent commercial vehicle reliability contest in Boston and the winning of first honors in a similar contest in New York the following week were triumphs, not only for the Morgan Company, but for Worcester as well, since both the car and its designer are Worcester "products."

The first motor truck built in America was a ten-ton steam affair that Mr. Ralph L. Morgan built in Worcester in 1901, after a year spent in investigation among the automobile factories of Europe. Several cars of this type were constructed, but they were found to be too heavy for the roads and the idea of manufacturing them for the market was abandoned.

The big powerful truck which came out victorious in the recent contests is the result of nine years of study and experiment. Every minute detail has been carefully worked out and perfected. To those who know Mr. Morgan and his methods it was evident that his winning was not the result of accident, but that every move of the car had been thought out beforehand and every contingency provided for.

Mr. Morgan stated that at no time before or during these contests was there any doubt in his mind as to the outcome. He knew just what was required and was sure that his machine had all the needful qualifications to win and plenty to spare.

Mr. Ralph Morgan comes honestly by his great engineering ability and ingenuity and is an example of the theory of heredity. His father, Mr. Charles Hill Morgan, has a world-wide reputation as a mechanical engineer.

Winning prizes has been a continuous performance for Mr. Morgan. In every contest in which he has entered a car he has carried off highest honors. In the first commercial vehicle contest on this side of the water, held in New York under the auspices of the Auto Club of America, he won the gold medal.

The car which won the famous race around the world (New York to Paris in 1908) was the product of Mr. Morgan's genius. When this "around the world" contest was first proposed, the automobile manufacturers threw up their hands in horror at the bare thought of the unnumbered difficulties of such an undertaking. With no repair shops after leaving the United States until the great deserts,

The New Plant of the Rockwood Sprinkler Company of Massachusetts.

Cup Won by Morgan Truck.

plateaus and mountains of Asia had been traversed and the frontiers of Europe crossed, there was need for a car which should be mechanically perfect. The car which he made not only won the race, but was the only American car which lived through it.

Mr. Morgan modestly attributes his success in the various contests which he has entered largely to the fact that he has always been able to command the best of materials in the construction of his cars.

It is worthy of note that Mr. Morgan has recently been granted a license by the Association of Licensed Automobile Manufacturers, a distinction accorded to but few makers since this organization was formed, and in no case to any who have not absolutely proven their product to have great merit both in design and performance.

New England Contracting Company

The New England Contracting Co., incorporated in 1909 under Massachusetts laws, Cyrus B. Savage, president, and Bertram E. Savage, treasurer, is one of the more recent successful business concerns of Worcester. The firm is engaged in bridge and structural steel work. An example of its bridge construction is found in the Parker River bridge at Newburyport, a State contract. The company has shops and siding at Chaffin's, where it has facilities for handling the heaviest structural steel.

Bertram E. Savage, manager of the business, was for nine years with the Riter-Conley Co., Pittsburgh, one of the largest structural firms in the business.

O. S. Kendall & Son

A recent addition to the long list of unique products made in Worcester is the lighting fixtures made of various woods by the firm of O. S. Kendall & Son, Main Street.

In 1872 O. S. Kendall began the present business. At first he did a general plumbing and heating business and sold ranges and heating equipment. Later a line of wood-working machinery was added and a general line of unfinished wood mantels turned out. This firm is the only one in the city engaged in this branch of manufacturing and its products are found in hundreds of Worcester homes. A large variety of mantels is carried in stock, and the concern is well equipped to turn out wood mantels from special designs.

The next venture was in the line of wood specialties and this branch is now receiving special attention.

One of the better known Kendall products is the Pneuvac vacuum cleaner. Starting in a small way, this branch of the business has steadily grown and Pneuvac cleaners are finding a wide sale.

The latest venture is the manufacture of lighting fixtures made of wood. As shown in the illustration, these are a unique and pleasing departure from the accepted standard of lighting fixtures and are meeting with a favorable reception from architects, decorators and the public.

They are made from varied designs, and the combination of wood and jeweled and paneled glass makes an attractive fixture, which is peculiarly well adapted to the carrying out of a complete scheme of interior decoration.

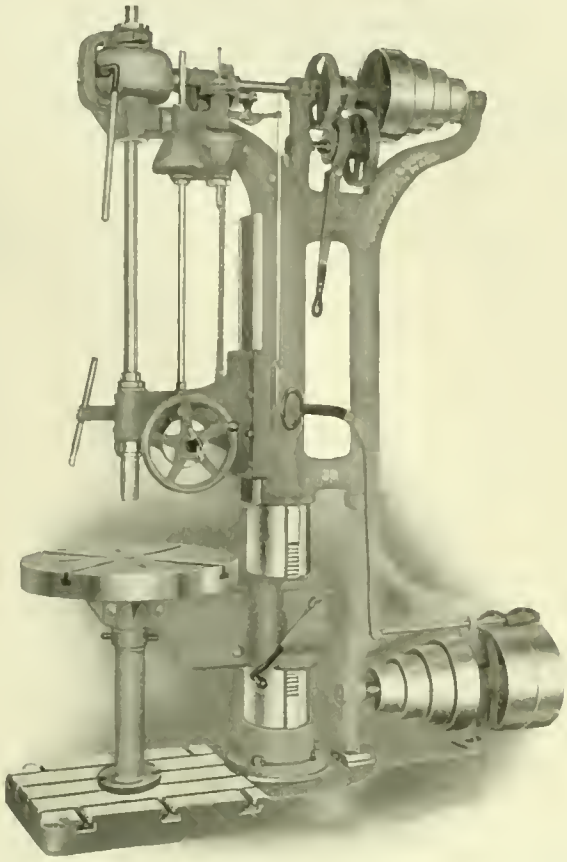
They are made of oak and birch, and can be so finished as to harmonize well with any interior finish or furniture They can be arranged for either gas or electricity, the piping or wiring being entirely concealed. The firm keeps several representatives on the road, selling this popular priced and artistic line direct to the retailers.

The original business, that of plumbing and heating equipment installation, has grown to large proportions and the retail end has kept pace. Today the company carries a full stock of supplies to meet the demands of purchasers in the line of gas or electric lighting and heating supplies, with numerous other fixtures and accessories that form part of the daily needs of the household.

A Kendall Lighting Fixture.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

WORCESTER, MASS., U. S. A.

SECOND-BELT DRIVE PLANERS

are peculiarly adapted to all classes of work requiring speed and accuracy, as they do away with all shock and jar, and results are large and finish perfect.

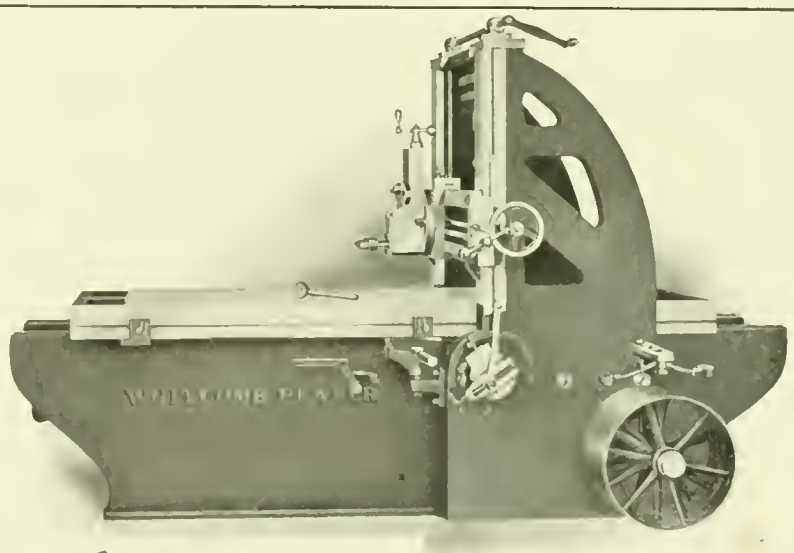
WHITCOMB

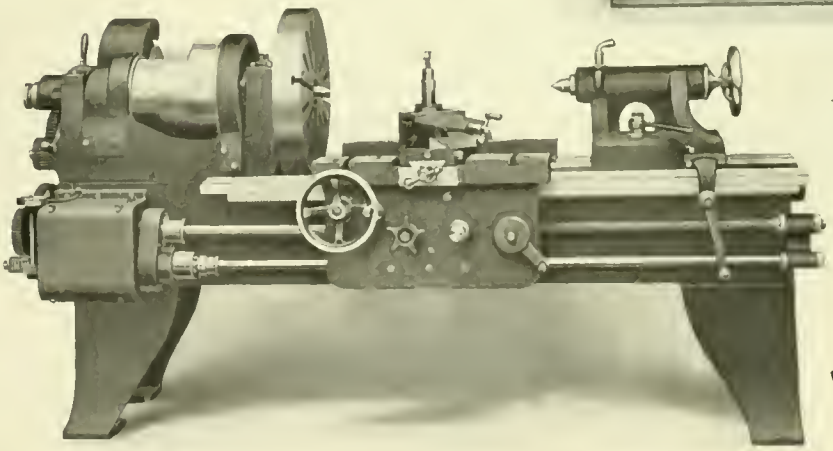
Planers

17″ 22″ 24″ 26″ 30″

Lathes

13″ 16″ 18″ 20″ 24″





THREE-STEP CONES, DOUBLE BACK GEARS

make these lathes rank among the greatest producers in their line.

Satisfaction Guaranteed

BLAISDELL

Whitcomb-Blaisdell Machine Tool Co.

Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser, and

Bank Block

Interior Banking Rooms

(The Oldest Bank in Worcester)

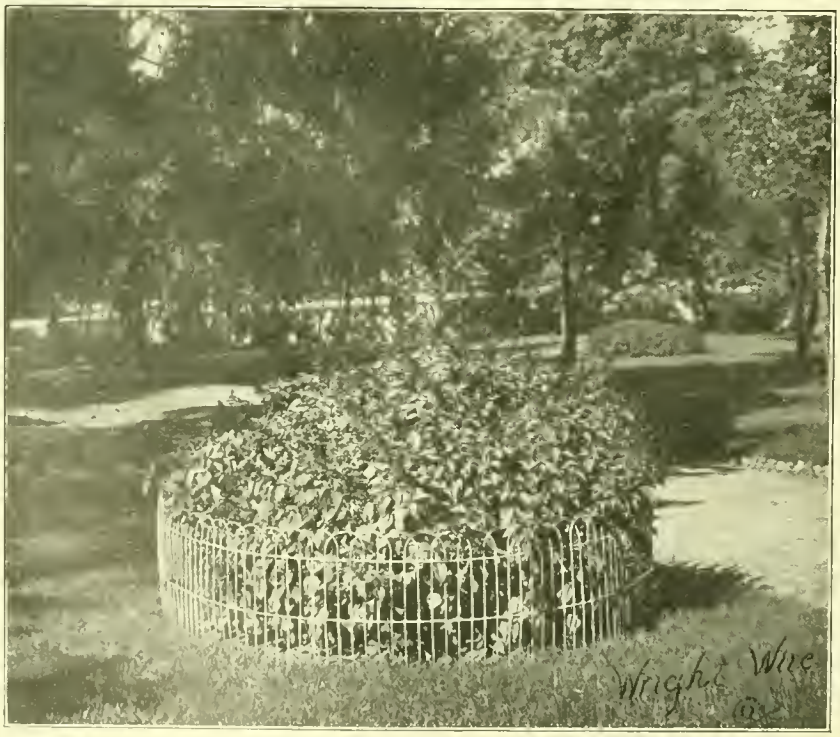
Worcester National Bank

11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

RUST PROOF GALVA-NIZED



FLOWER BED GUARD

Ornamental Wire Fences, Gates, Tree Guards

WAREHOUSES:
New York, Philadelphia
Chicago, San Francisco
Made in Worcester.

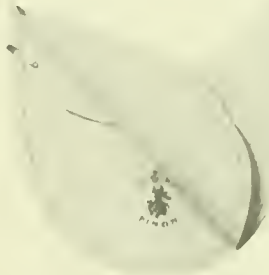
WRIGHT WIRE COMPANY
Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"DE VARS" Quality

"DE VARS" American Maid Hose-Supporters

"DE VARS" E. Z. B. Suspenders



"DE VARS" Pinon Dress Shields

Made in all sizes and styles

Remember that "DE VARS" is on the BEST Hose-supporters, Suspenders and Shields

American Narrow Fabric Co.

MANUFACTURERS

Worcester, Mass.

SEATTLE CHICAGO NEW YORK BALTIMORE

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1909,	$32,540,041.03
Liabilities, Jan. 1, 1909,	$29,843,942.37
Surplus, Jan. 1, 1909,	$2,696,098.66

A. G. BULLOCK, President
BURTON H. WRIGHT, Secretary

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester's Ideal Clothing Store, Hammond Clothing Co., Main and Chatham Streets

HEYWOOD TRADE MARK SHOE

Heywood Boot and Shoe Co.

HEYWOOD TRADE MARK SHOE

MANUFACTURERS

Heywood Special Shoe for Women

"Heywood Shoes Wear"

COMFORT FOR TENDER FEET

EASE FOR
ENLARGED JOINTS

HEYWOOD TRADE MARK SHOE 1864

Factory: 70 Winter St. Worcester, Mass., U. S. A.

Retail Store: 415 Main Street

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

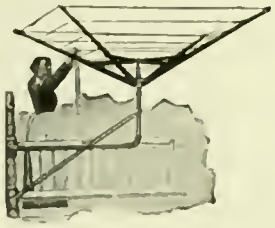
Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.



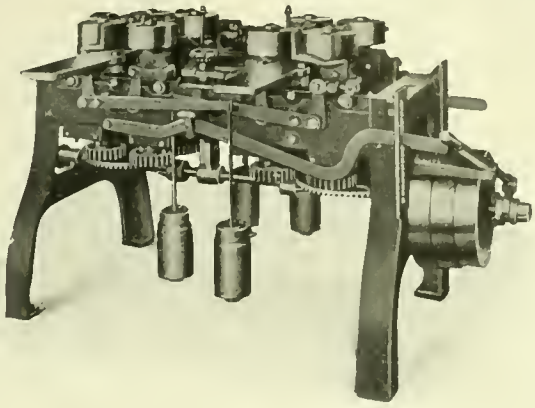
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

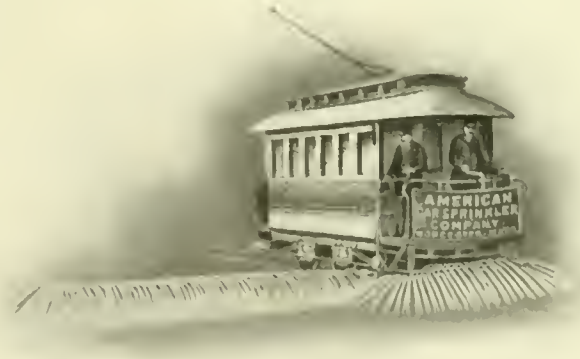
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



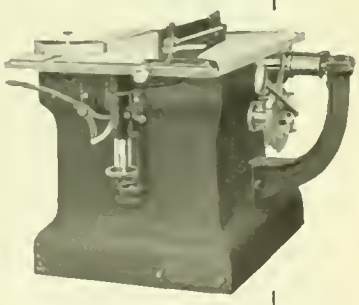
AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

3 IN ONE!

Kidder Patent Universal Sawing Machine. Carries three saws. Quick adjustment. Especially adapted to Pattern and Cabinet work. Send for catalog.



R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

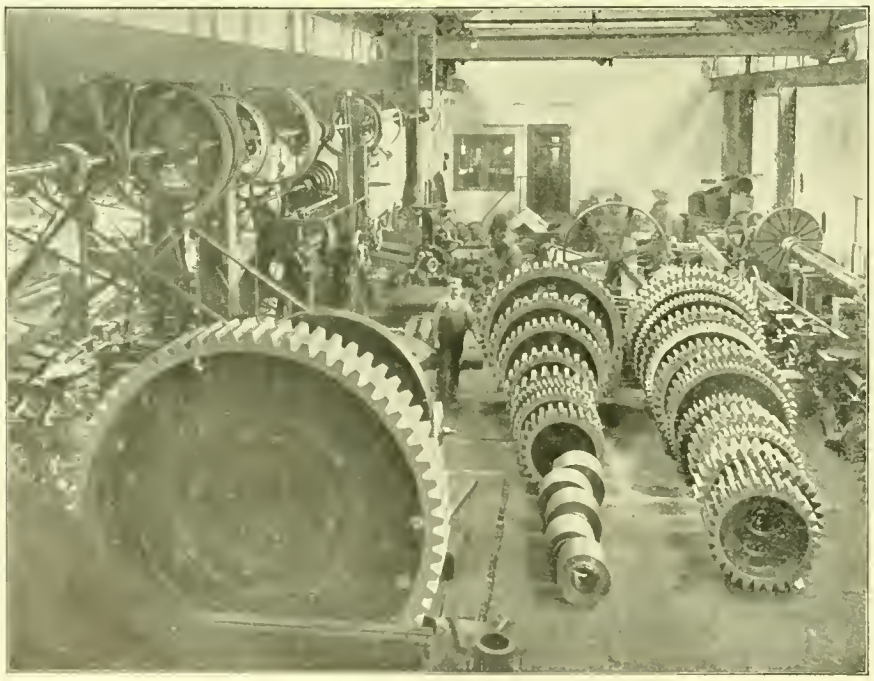
Craig Street Facade, Bank of Montreal, Montreal, Quebec
McKim, Mead & White, Architects.

The Norcross Brothers Company, Builders.

The Norcross Brothers Company

General Contractors and Builders

New York
Boston
Providence
Washington
Worcester



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

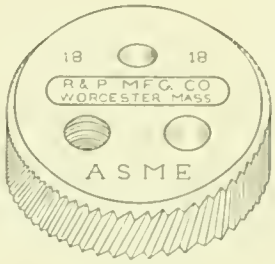
MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

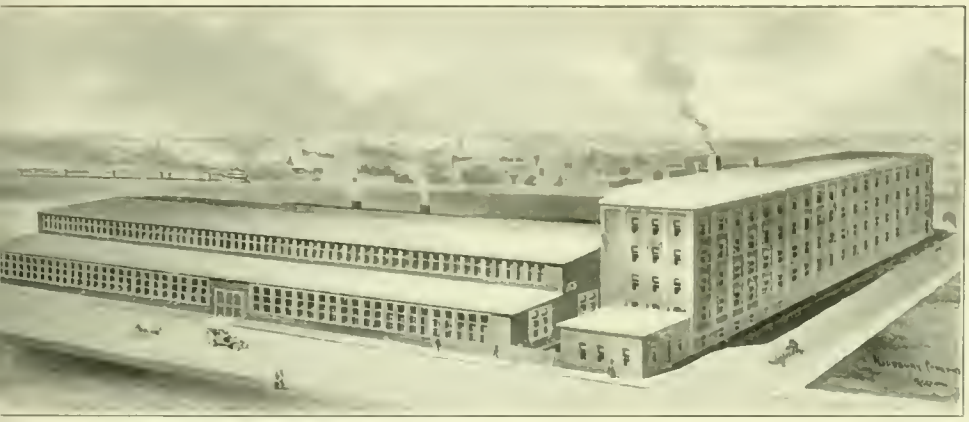
Wood Screws.
Machine Screws,
Taps and Dies.
Stove Bolts.
Tire Bolts.
Cap Screws.
Set Screws.
Small Nuts.
Rivets and Burrs.
Hanger Bolts.
Chair and Stove Rods.



Machine Screw Gages.
Special Gages.

REED & PRINCE MFG. CO.
Worcester, Mass., U. S. A.

HIGH GRADE GREY IRON CASTINGS



OUR CASTINGS

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings
up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co., Gold and Assonet Sts., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

ESTABLISHED 1851 CAPITAL AND SURPLUS, $1,800,000.00

This is THE PLANT where G&K LEATHER BELTING is made.

Write us for prices.

THE GRATON & KNIGHT MFG. CO. TANNERS AND BELT MAKERS Worcester, Mass., U. S. A.

BRANCHES: Atlanta, Boston, Chicago, Milwaukee, Minneapolis, New York, Philadelphia, Portland (Ore.), Seattle, St. Louis, San Francisco

NO METHOD OF PUBLICITY CAN SO IMPRESSIVELY DENOTE THE DIGNITY, GROWTH AND CAPACITY OF YOUR BUSINESS AS A

CARLTON BIRDSEYE VIEW

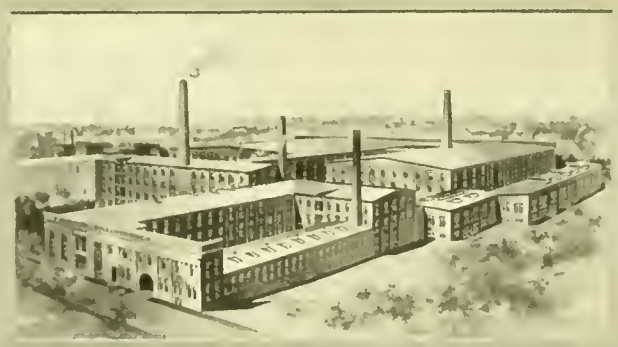
ALWAYS WELL RECEIVED AND PLACED CONSPICUOUSLY IT TELLS AN ELOQUENT STORY IN A MOST CONVINCING MANNER. LET US TELL YOU MORE ABOUT IT.

CARLTON ENGRAVING CO.

SUGGESTERS DESIGNERS AND MAKERS OF THE

BEST PRINTING PLATES

418 MAIN ST WORCESTER, MASS.



A CARLTON BIRDSEYE VIEW

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

J. T. BRIERLY, Pres. R. K. HYDE, Treas.

THE BRIERLY-LOMBARD CO.

SUCCESSORS TO

CRAWFORD & CO.
(FORMERLY SUMNER PRATT & CO.)

Steel Pulleys,
Belting,
Hangers.

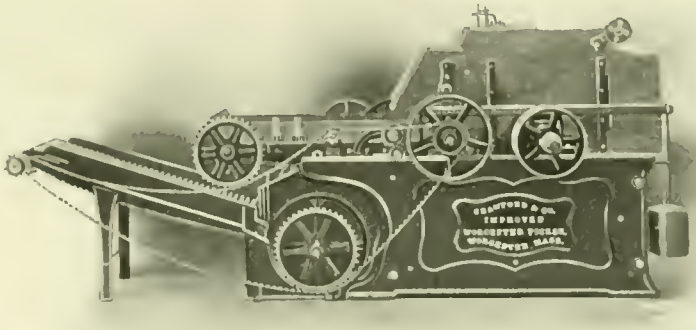
Power Transmission.

New and Second-hand Woolen Machinery.

Everything in Mill Supplies.

ESTABLISHED 1847

663-665
MAIN STREET



THE IMPROVED WORCESTER SHODDY PICKER

WORCESTER, MASS.

LOMBARD MACHINE CO.
MANUFACTURERS OF

Preparatory
Machinery

For Woolen Mills, including

PICKERS,
CARDS (WOOLEN AND WORSTED),
CARD BREASTS,
CARD FEEDS,

ALSO THE

LOMBARD-LANDRY
HIGH-SPEED LOOM

For Woolens and Worsteds.

ESTABLISHED 1823

CORNER STAFFORD AND
HEARD STREETS

C. B. POST, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers

by

Improved Systems—Go Ahead Methods

Everything the best that money and brains can produce

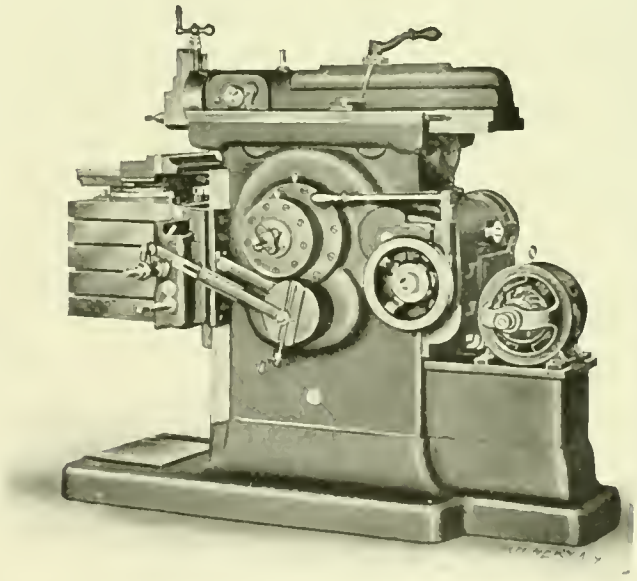
The School of Experience

Worcester Business Institute

476 Main Street

Telephone 5218 Opposite City Hall

18″ All-Geared Drive Shaper



A Shaper because of the quantity and quality of work that it will turn out puts shaper-production on a new and higher level.

STOCKBRIDGE MACHINE CO.
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Available Sites for Manufacturing Plants in Worcester

THE IDEAL INDUSTRIAL CITY

For plants already established, who for any cause desire a change, or for BRAND-NEW PLANTS

Plans and Specifications

Showing location on B. & A. R. R. or B. & M. R. R. Water in abundance, trolley connection, city water, gas, electric lights and power, and all modern conveniences may be seen by calling or addressing

The Worcester Board of Trade

11 Foster Street Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1908 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

The Marvin Press

ALL KINDS OF
JOB PRINTING

Art Calendars a Specialty

If you intend to advertise YOUR BUSINESS in this way during 1911

Wait for Our Representative

We do business here. Our prices are right.

OXFORD, MASS.

Telephone 7-5

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building
Worcester — State Mutual Building

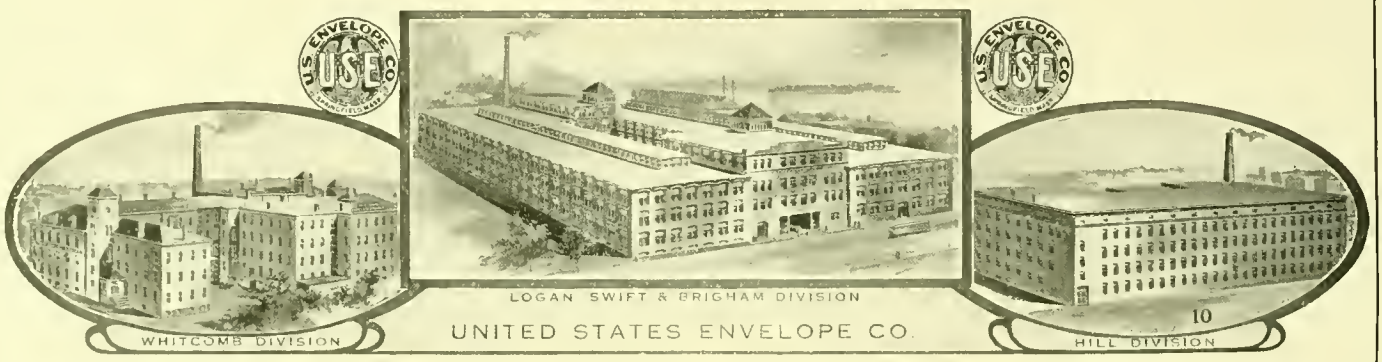
Prospectus containing one hundred references mailed upon request.

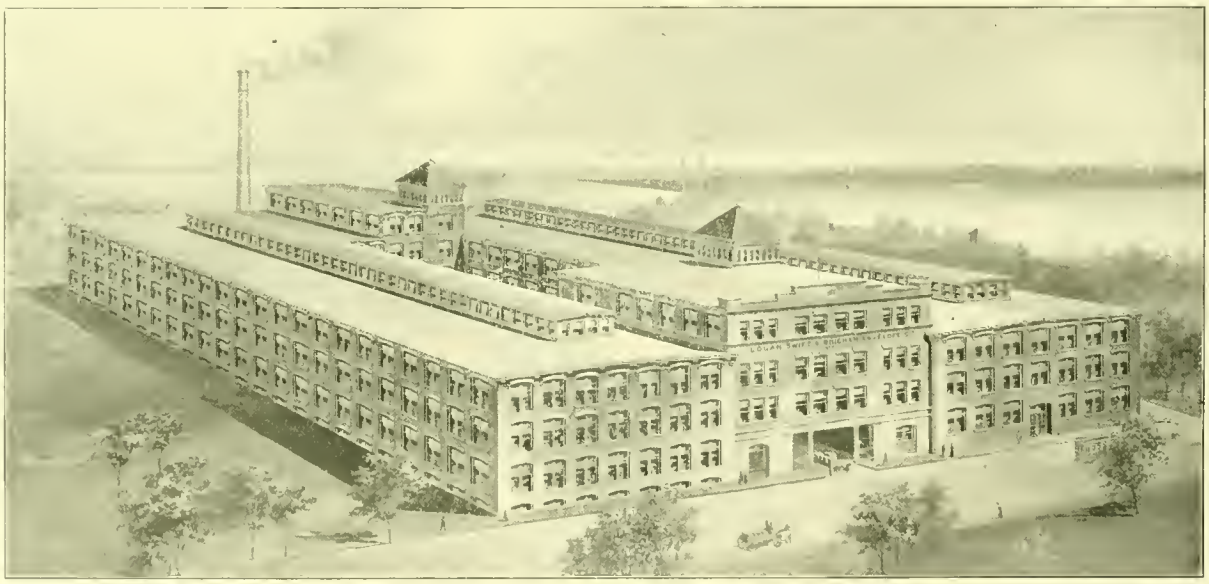
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser

WORCESTER

THE PIONEER CITY OF AMERICA FOR MACHINE-MADE ENVELOPES STILL SETTING THE STANDARD FOR THE COUNTRY.

MORE ENVELOPES ARE MANUFACTURED IN WORCESTER THAN IN ANY OTHER CITY IN THE WORLD.





LOGAN, SWIFT & BRIGHAM DIVISION
Approximately 170,580 Square Feet of Floor Space

WORCESTER PLANTS

OF

The United States Envelope Co.

THE LARGEST ENVELOPE MANUFACTURER IN THE WORLD, MANUFACTURING ALL SIZES AND GRADES OF ENVELOPES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

BON TON CORSETS

are universally recognized as the ultra-fashionable high-grade corsets of the present day. All the better grades are boned with WALOHN, the wonderful indestructible boning that will not break, warp or rust. *Price, $3 to $12*

ROYAL WORCESTER CORSETS

are absolutely the *best medium-priced* corsets the world has ever known. They are the accepted standard of authentic style, perfect fit and workmanship, and are boned with best quality non-rustable wire. *Price, $1 to $3*

ADJUSTO REDUCING CORSETS

are *patented*. They are equipped with the famous "Reducing Bands," which can be instantly adjusted. Double-boned throughout with wide, flat, double bones. Suitable for both medium and full figures. *Price, $3 and $5*

WE ARE SOLE WORCESTER AGENTS FOR THESE FAMOUS CORSETS

BOSTON STORE
Denholm & McKay Co.

A DOLLAR Bill and a Two Dollar Bill can be produced by the Government at about the same price — a few cents each. The face value of one is 100 cents; the other is just double that amount

It is the Face Value that Counts

It is the face value of your **Printed Matter** that counts — your office stationery your advertising booklets and catalogs.

Different shops will produce certain jobs at about the same price; but there will be a difference in the face value.

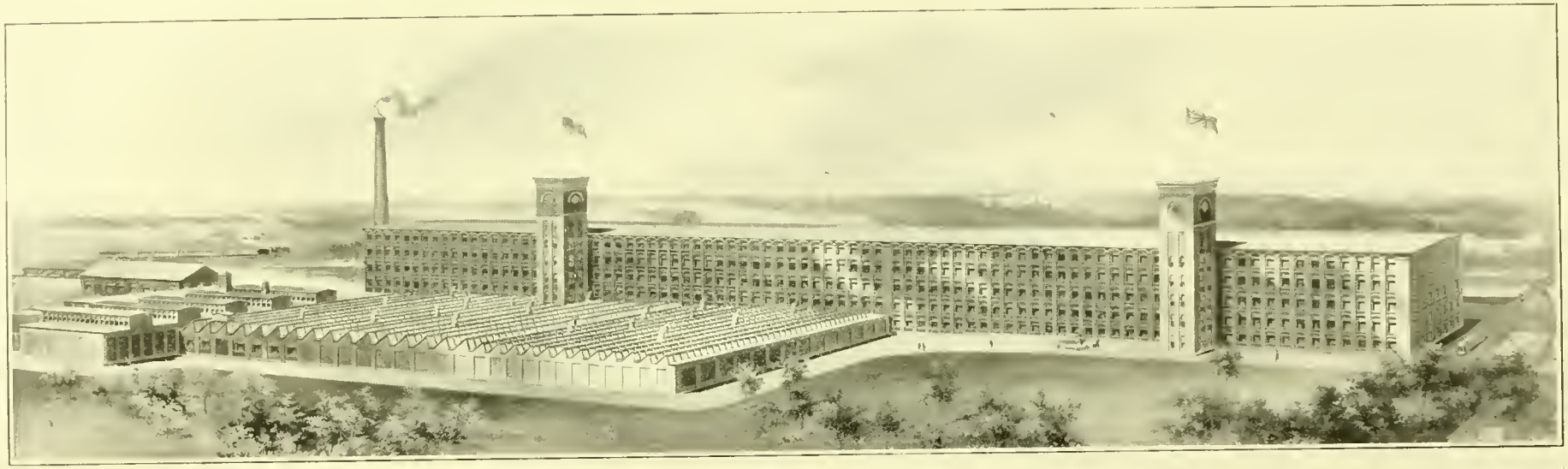
If it is "face value" you are interested in, then we are interested in you.

THE COMMONWEALTH PRESS, 50 Foster St.

The Commonwealth PRESS OLIVER B. WOOD WORCESTER MASS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Jos. Benn & Sons, Inc.

GREYSTONE MILLS GREYSTONE, R. I.

F. P. Sheldon & Sons, Engineers

J. W. Bishop Co., Contractors

Worcester Boston New York Providence New Bedford

You will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Mechanics Hall During Exposition

Photo of 1908 Exposition

Second Worcester
Mechanical, Electrical and Textile

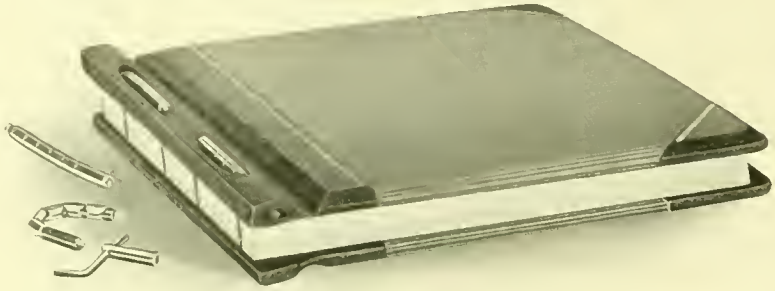
EXPOSITION

Mechanics and Washburn Halls,
February 5 to 12, 1910

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WHY NOT USE THE BEST?

"DeLUXE" FLEXIBLE POST BINDER FOR TRANSFER LEDGERS AND OTHER PURPOSES IS IT



WHY?

TRY ONE AND SEE

MADE FOR ANY SIZE SHEET, WITH POSTS ON EITHER EDGE. NO LIMIT TO CAPACITY—JUST ADD SECTIONS

NOTICE THE POSTS LIE FLAT

MANUFACTURED BY

OFFICE SPECIALTIES DeLUXE (Inc.)

AUSTIN AND HIGH STREETS WORCESTER, MASS.

THE AURORA

About fifty yards north of Odd Fellows' Hall. A select high-grade Family Hotel, thoroughly up-to date. Rooms single or en suite; furnished or unfurnished. *Special rates for a prolonged stay.*

656 MAIN STREET, WORCESTER, MASS. C. F. Stevens, *Proprietor*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE THREE LEADING HOTELS OF WORCESTER MEMBERS OF THE NEW ENGLAND : : HOTEL MEN'S ASSOCIATION : :

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

THE BAY STATE HOUSE

In the Banking District, and one block from Mechanics Hall and Worcester's leading theatre.

European Plan Club Breakfasts Long Distance Phones in Every Room

283 MAIN STREET

G. A. KEELER, Formerly of Hotel Essex, Boston

Opposite City Hall Park

New Park Hotel

Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

View in Department of Norton Company Factory where Grinding Wheels are Trued and Faced

Norton Alundum Wheels are a good investment because of what they will earn in the shop—because of fast-cutting quality and long life

NORTON COMPANY

WORCESTER, MASS.

New York Chicago Niagara Falls

A Corner in Testing Department of Norton Grinding Wheel Works

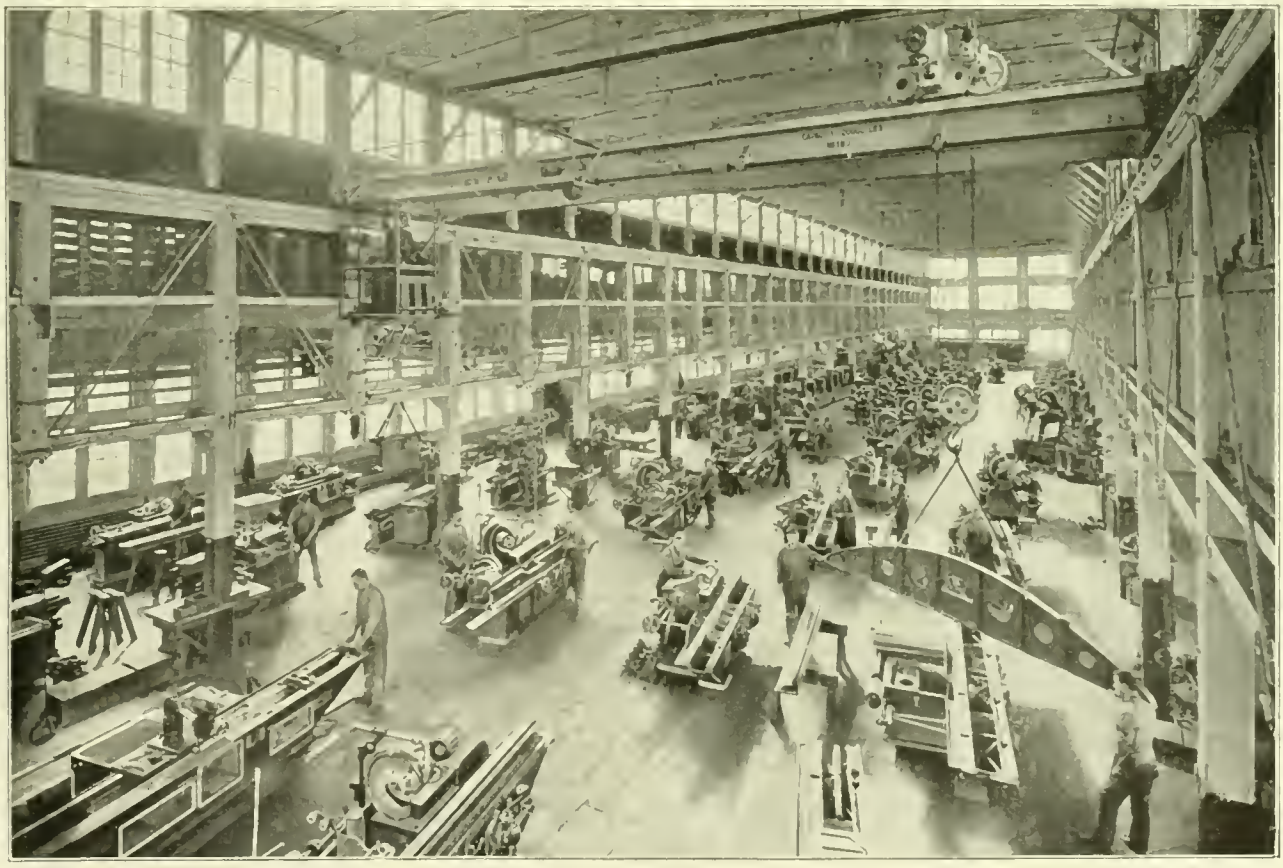
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

Norton Grinding Company

This is one of the few large plants devoted to the manufacture of grinding machines exclusively. Their product consists of plain cylindrical grinders, universal tool and cutter grinders, bench and floor grinders.

The line of cylindrical grinders includes sizes ranging from 3000 lbs. to 20 tons in weight—from 6″ swing to 32″ swing, from 32″ to 22′ between centres.

The company has enjoyed rapid growth, and its product is held in high repute on both continents.

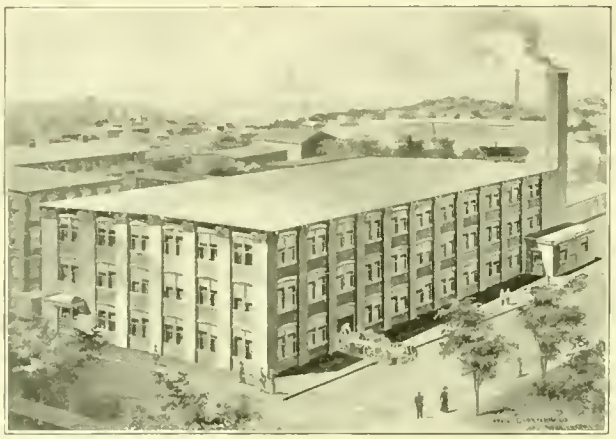


A Portion of the 81,000 sq. ft. Devoted Exclusively to the Production of Grinding Machines, Norton Grinding Co.

Worcester Magazine Advertiser

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.



Manufacturers of

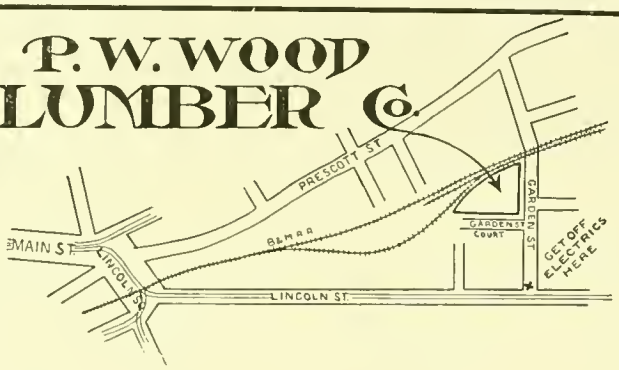
LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle YOUR business

Made in Worcester.

P. W. WOOD LUMBER Co.



SUCCESSORS TO WORCESTER LUMBER CO.

All kinds of

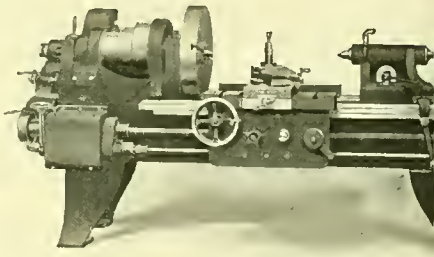
LUMBER

For Building and Shop Work carried in Stock

Telephone 3095

11 GARDEN ST.,
WORCESTER, MASS.

Start Right



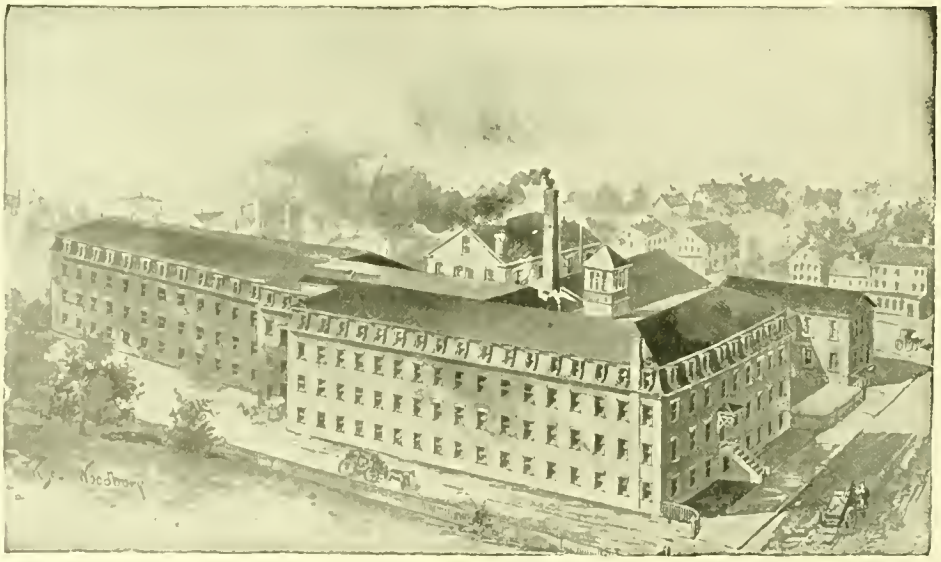
Get good photographs and the rest will follow.

E. B. LUCE

Expert photographer of machinery, tools and all commercial work

TELEPHONE

Walker Building



Hammond Reed Company

Manufacturers of

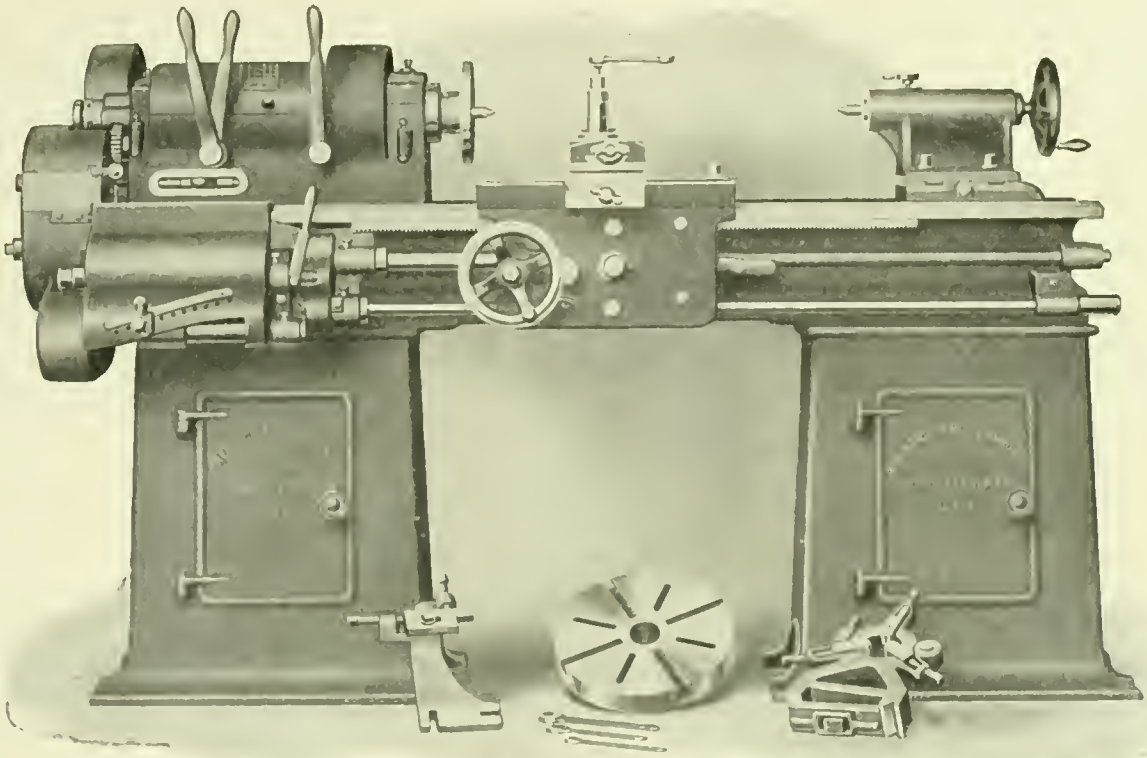
Organ Reeds,
Reed Boards
and other
Organ Supplies

Telegraph and Cable Address.
"Reeds," Worcester, Mass., U. S. A.

WORCESTER, MASS.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

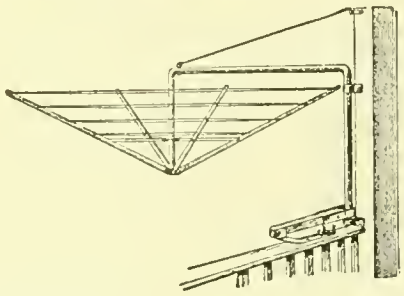
Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The VICTOR Improved

Roller Bearing Clothes Reels

Ash
Chutes,
Sifters,
Etc.

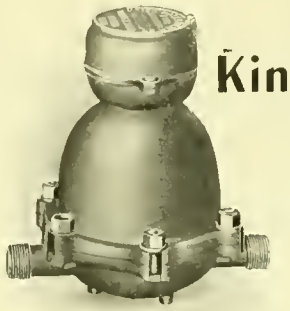


Manufactured by **The R. W. Robinson Co.**

86 Foster Street

Telephone 6019 — Agents Wanted

Made in Worcester.



The King Disc Meter

COMBINING

Best Material and Workmanship

CONTRACTORS, PATRONIZE HOME INDUSTRY

Union Water Meter Company

Worcester, Mass.

See our exhibit, Section 8, at Mechanical, Industrial and Textile Exposition, Feb. 5 to 12.

Made in Worcester.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

ANGLES AND CHANNELS

BLACKSMITH & CARRIAGE HARDWARE,

JUNCTION OF BRIDGE, MECHANIC AND FOSTER STREETS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

EVERY VARIETY
of WOODEN *and* PAPER
ALSO CLOTH COVERED BOXES

B O X E S

One of the Most Complete Plants in Massachusetts
WILLIAMS & BRIDGES CO.
Manufacturers
72-86 Central St., Worcester, Mass.
Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings,
Ball Bearings

Steam-Pipe Collars
Ferrules and
Sheet Metal Specialties
Case Hardening
Nickel, Copper and
Brass Plating
also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Walter J. Stone

Stone & Berg Lumber Co.

Successors to JOHN GATES' SONS

EVERYTHING IN

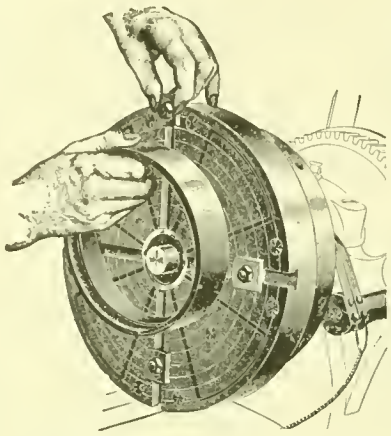
LUMBER

Telephone 3704

181 Union Street Worcester, Mass.

August M. Berg

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

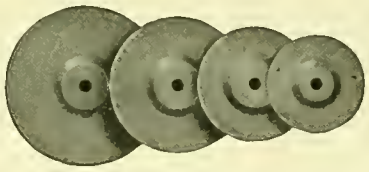
O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks



Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather · Mill Strapping · Rubber Belting
Canvas Belting · Belt Lacing · Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

ADAMS & POWERS

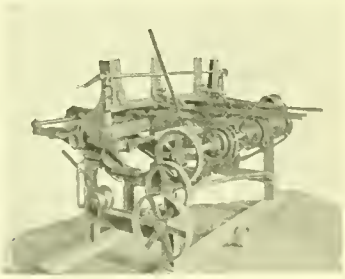
Dealers in

Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.

Estimates from plans furnished

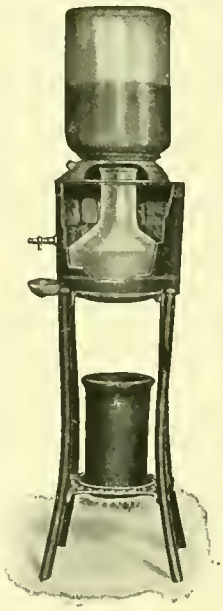
150-158 Union Street, Worcester, Mass.

Made in Worcester.



COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.



Absolutely Pure

Sparkling Polar Water
and
White Seal Ginger Ale

BOTTLED AT THE SPRING

Full line of

Carbonated Beverages

Pure Syrups and Saratoga Natural Gas

Leicester Polar Spring Co.
28 Myrtle St. Telephone
C. H. CLARENDEN, Mgr.

Polar Spring Water on Draught at Board of Trade Rooms

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

Progress Pictures
Erwin Cotton Mills

Durham, N. C.

F. P. SHELDON & SONS
Engineers

Interior Spinning Mill. 200′ x 518′

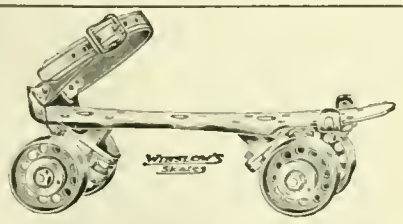
Weave Shed. 300′ x 300′

FISKE-CARTER CONSTRUCTION CO.

Builders

Worcester, Mass.

OFFICES
11 Foster Street
Spartanburg, S. C. Greenville, S. C.



Winslow's Rink Skate No. 17, fitted with "Web" Steel Rolls

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

Winslow's Hockey Skate No. 1360

THE SAMUEL WINSLOW SKATE MFG. CO.

Sales and Stock Rooms.
NEW YORK, 84 Chambers Street.
LONDON, 8 Long Lane, E. C.
PARIS, 64, Avenue de la Grande-Armee.
BERLIN, W. 9, Potsdamer Strasse, 4.

Factory and Main Office:
WORCESTER, MASS., U. S. A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xxiv
American Car Sprinkler Co., car sprinklers, v
American Narrow Fabric Co., iii
Aurora, The, xvi
Bay State House, xvii
Bishop Co., J. W., xiv
Blake, Jr., & Co., George F., iron and steel, and supplies, xxii
Blanchard & Co., F. S., printers, Back cover
Brierly-Lombard Company, xxxiii
Brownell, George L., twisting and spinning machinery, xxvi
Carlton Engraving Co., viii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, xiii
Crompton & Knowles Loom Works, looms, Inside back cover
Cummings Shoe Co., Worth cushion shoes, xiii
Davis & Riggs, commercial photographers, xxiv
DeLong, W. H., dental disks, xxiv
Exposition, xiv
Fiske-Carter Co., general contractors, xxv
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Clothing Co., iv
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxi
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Heywood Boot & Shoe Co., fine shoes, iv
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xx
Hudson Belting Co., leather belting, xxiv
Jackson St. Foundry, iron castings, xxiii
Kidder, R. E., drawing tables, v
Leicester Polar Spring Co., xxiv
Luce, E. B., commercial photographer, xxi
Marvin Press, The, xi
Morgan Construction Co., rolling mill equipment, vi
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxiii
Multiple Woven Hose & Rubber Co., fire hose and belting xxvi
New England Audit Co., xi
New Park Hotel, xvii
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xviii
Norton Grinding Co., grinding machines, xix
Office Appliances DeLuxe, Inc., xvi
People's Savings Bank, x
Pond Machine & Foundry Co., vii
Pratt & Inman, iron and steel, xxii
Prentice Bros. Company, drilling machines, engine lathes xx
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robinson Co., The R. W., xxii
Royal Worcester Corset Co., xiii
Sherman Envelope Co., envelopes and specialties, v
Smith & Son, Inc., H. E., xvii
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxiii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xii
Stone & Burg Lumber Co., xxiii
Snyder & Son, J. E., upright drills, i
United States Envelope Co., xii
Union Water Meter Co., water meters, xxii
Walker & Co., O. S., chucks, xxiv
Warren Hotel, The, xvii
Warren, J. F. & W. H., leather belting and mill supplies, xxi
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, i
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxvi
Williams & Bridges, wooden and paper boxes, xxiii
Winslow Skate Co., ice and roller skates, xxv
Wire Goods Co., wire hardware, x
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., x
Wood Lumber Co., P. W., xxi
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xxi
Worcester Machine Screw Co., set, cap and machine screws, xxv
Worcester National Bank, ii
Wright Wire Co., wire and wire cloth, wire rope, etc. ii
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

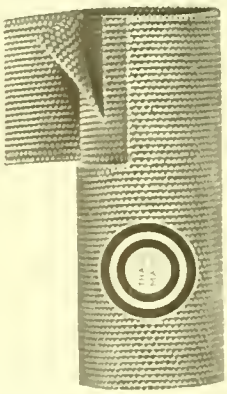
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

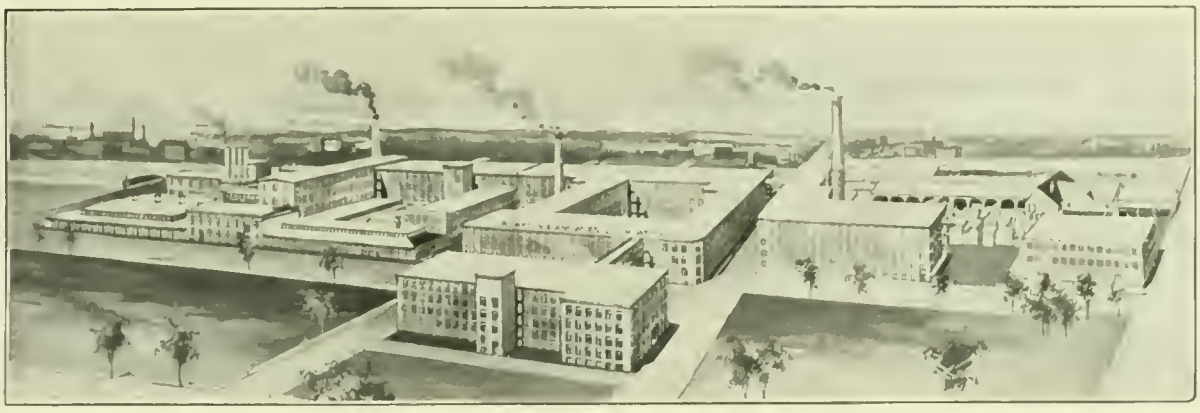
SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC



WORCESTER PLANT

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

"Made in Worcester"

Master Minds at the Commonwealth's Heart

By PERCY H. EPLER

Biographies of ten internationally great figures whose point of departure has been the Heart of the Commonwealth. A book to excite the pride of every dweller in central Massachusetts; an inspiration to old and young.

317 pages, 12mo, Brown Cloth, English square back binding; illustrated.
Price $2.00 net. At bookstores or of the publishers.

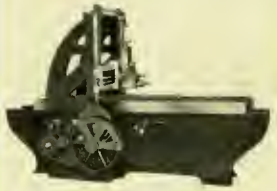
F. S. Blanchard & Co. 6 Walnut St., Worcester, Mass.

EQUIPMENT, ETC. GAS PRODUCERS

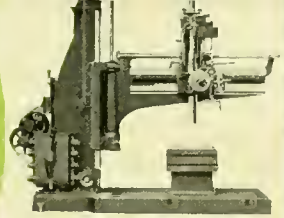
MORGAN CONSTRUCTION COMPANY

STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY



DRILLING MACHINES
ENGINE LATHES
PRENTICE BROS. CO.

SLATER BLDG.

PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE RATON & KNIGHT MFG. CO.

ORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

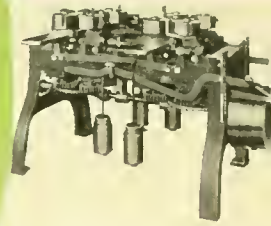
ORGAN REEDS
HAMMOND REED COMPANY

FOR ALL MOTOR CARS

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPAN

"MADE IN WORCESTER, U. S. A."

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

ROPOSED NEW UNION STATION

CITY HALL

GOVERNMENT BLDG.

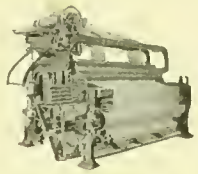
LATHES
F. E. REED COMPANY

BI-MOORE" BEST HOSE

ULTIPLE WOVEN SE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

HE BEST ICE AND ROLLER SKATES

LL DRYER CO.

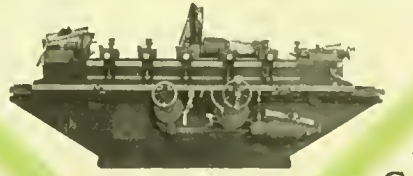
GOOD ENVELOPES

UNITED STATES ENVELOPE CO.

ART
NOVELTIES
VALENTINES

THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES



NORTON GRINDING CO.

The WYMAN & GORDON CO.
DROP FORGINGS

O. S. WALKER & CO.

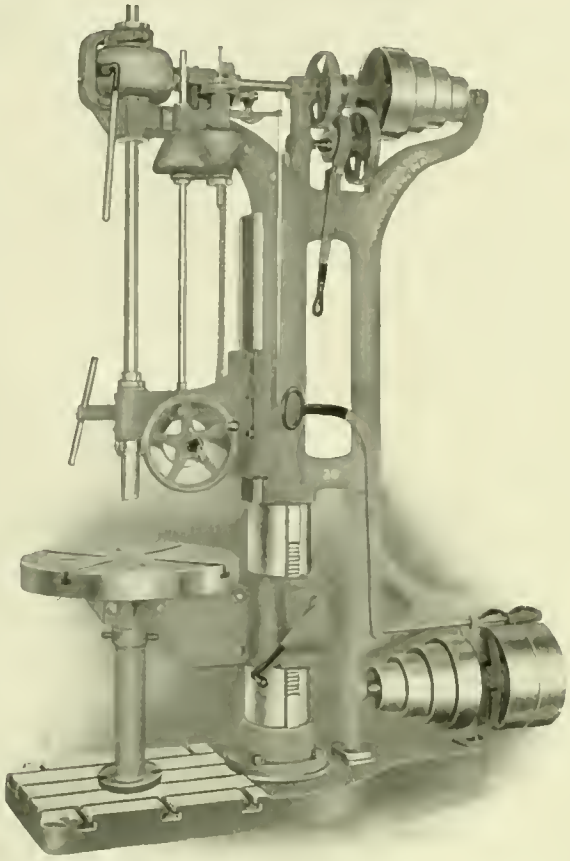
SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds
Hammond Reed Co.

Everything in Wire
TRADE MARK
The Wire Goods Co.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

WORCESTER, MASS., U. S. A.

SECOND-BELT DRIVE PLANERS

are peculiarly adapted to all classes of work requiring speed and accuracy, as they do away with all shock and jar, and results are large and finish perfect.

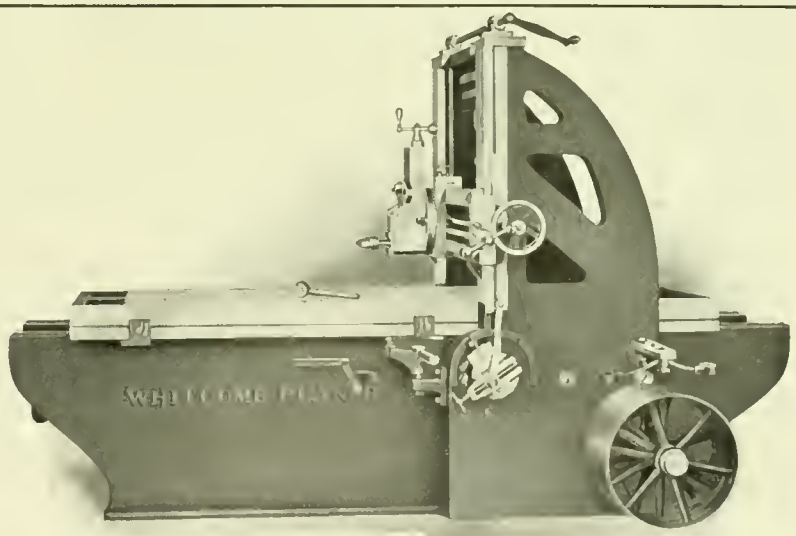
WHITCOMB

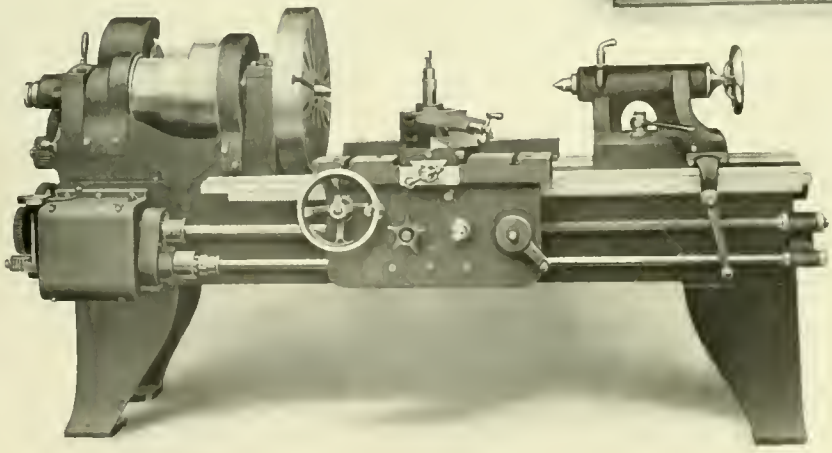
Planers

17″ 22″ 24″ 26″ 30″

Lathes

13″ 16″ 18″ 20″ 24″





THREE-STEP CONES, DOUBLE BACK GEARS

make these lathes rank among the greatest producers in their line.

Satisfaction Guaranteed

BLAISDELL

Whitcomb-Blaisdell Machine Tool Co.

Worcester, Mass.

Made in Worcester.

INCORPORATED 1868

Worcester Trust Company

Capital, Surplus and Profits - - $1,300,000
Total Resources - - - 10,000,000

IN ADDITION TO A GENERAL BANKING BUSINESS
IS AUTHORIZED TO ACT AS
EXECUTOR, ADMINISTRATOR, GUARDIAN, TRUSTEE

CITY HALL BRANCH
448 MAIN STREET

MAIN OFFICE
342-344 MAIN STREET

LINCOLN SQ. BRANCH
11 MAIN STREET

MAIN OFFICE, 342-344 MAIN STREET

WILLIAM D. LUEY, *President*

HENRY A. MARSH, HENRY P. MURRAY, *Vice-Presidents*

SAMUEL H. CLARY, *Treasurer* ALVIN J. DANIELS, *Secretary*

Directors

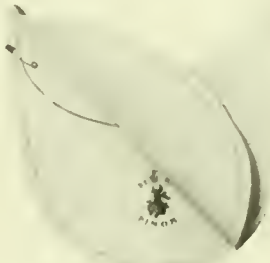
CHARLES S. BARTON
GEORGE F. BLAKE
A. GEORGE BULLOCK
JOHN H. COES
ALEXANDER DEWITT
THOMAS B. EATON
WILLIAM ENDICOTT, JR.
HENRY F. HARRIS
CHARLES H. HUTCHINS
LINCOLN N. KINNICUTT
EDWIN T. MARBLE
J. RUSSEL MARBLE
A. W. PARMELEE
NEAL RANTOUL
WILLIAM H. SAWYER
FRANK BULKELEY SMITH
CHARLES M. THAYER
ROBERT M. WASHBURN
GEORGE W. WELLS
M. J. WHITTALL
G. MARSTON WHITIN
ROBERT WINSOR
A. O. YOUNG

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

"DE VARS" Quality

"DE VARS" American Maid Hose-Supporters

"DE VARS" E. Z. B. Suspenders



"DE VARS" Pinon Dress Shields

Made in all sizes and styles

Remember that "DE VARS" is on the BEST Hose-supporters, Suspenders and Shields

American Narrow Fabric Co.

MANUFACTURERS

Worcester, Mass.

SEATTLE CHICAGO NEW YORK BALTIMORE

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910, $34,681,951.04
Liabilities, Jan. 1, 1910, $31,584,938.72
Surplus, Jan. 1, 1910, $3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. Carter, Secretary

BARRETT, SNOW & ARNOLD, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

Bank Block

Interior Banking Rooms

(The Oldest Bank in Worcester)

Worcester National Bank

11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

Flower
Bed
Guard
Trellis
Tree
Guards
Trellis
Arches
Park
Baskets

Galva-
nized
by our
Rust
Proof
Process.

Ornamental Wire and Iron Fences and Gates

WAREHOUSES:
Boston,
New York, Philadelphia
Chicago, San Francisco
Made in Worcester.

WRIGHT WIRE COMPANY

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL'S CHAMPION LAWN CLOTHES DRYER

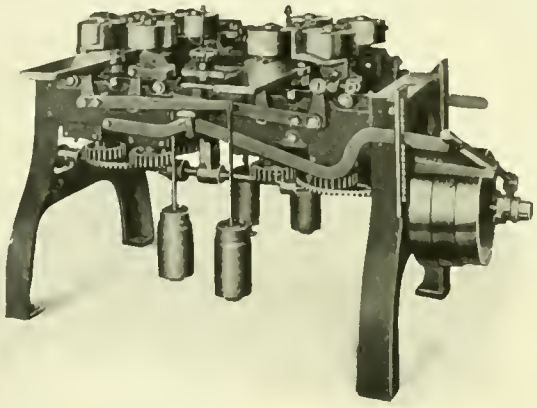
Made in Worcester.

HILL'S BALCONY CLOTHES DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

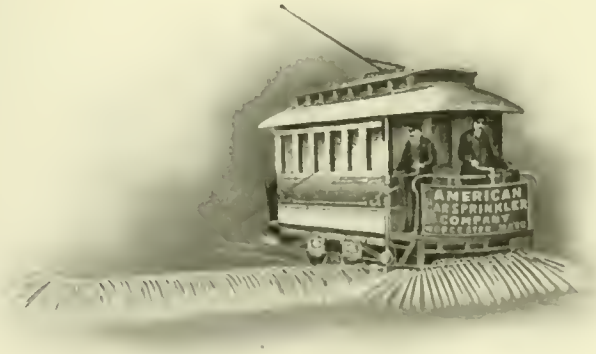
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



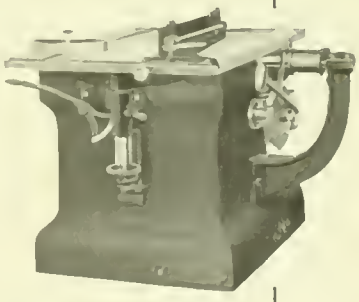
AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

3 IN ONE!

Kidder Patent Universal Sawing Machine. Carries three saws. Quick adjustment. Especially adapted to Pattern and Cabinet work. Send for catalog.



R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE, yourself, the advertiser

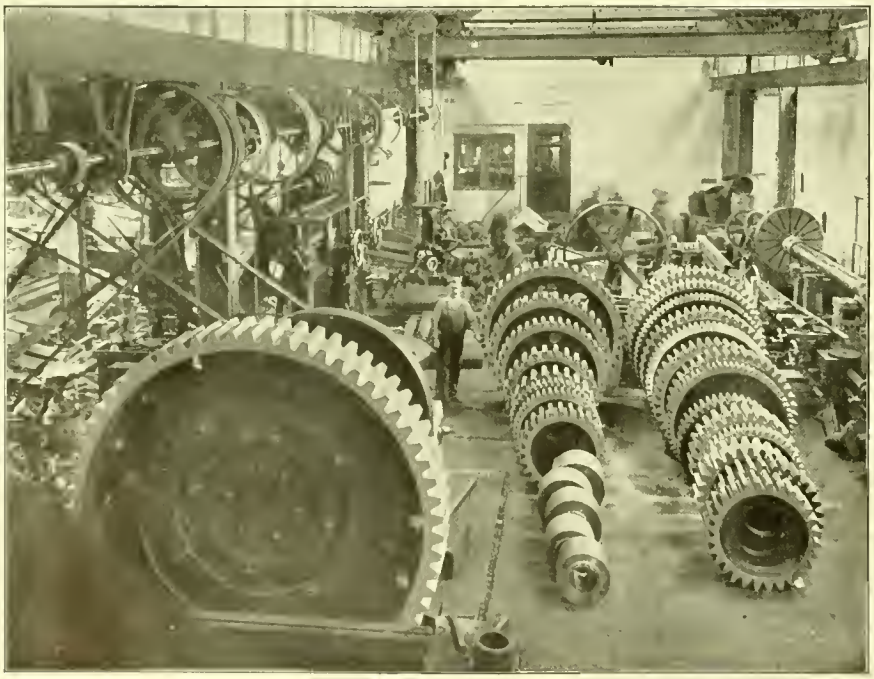
Craig Street Facade, Bank of Montreal, Montreal, Quebec
McKim, Mead & White, Architects.

The Norcross Brothers Company, Builders.

The Norcross Brothers Company

General Contractors and Builders

New York
Boston
Providence
Washington
Worcester



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

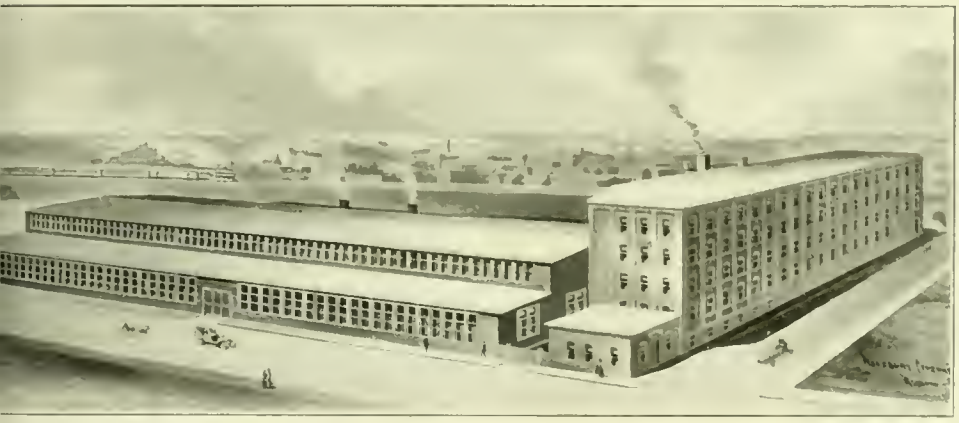
Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

HIGH GRADE GREY IRON CASTINGS



OUR CASTINGS

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings
up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co., Gold and Assonet Sts., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

ESTABLISHED 1851 CAPITAL AND SURPLUS, $1,800,000.00

This is THE PLANT where G&K 1851 LEATHER BELTING is made.

Write us for prices.

THE GRATON & KNIGHT MFG. CO. TANNERS AND BELT MAKERS **Worcester, Mass., U. S. A.**

BRANCHES: Atlanta, Boston, Chicago, Milwaukee, Minneapolis, New York, Philadelphia, Portland (Ore.), Seattle, St. Louis, San Francisco

HEYWOOD TRADE MARK SHOE

Heywood Boot & Shoe Co.

MANUFACTURERS

HIGH GRADE SHOES FOR MEN

"THE FOOT DOCTOR"

CUSHION

SHOE

A COMFORT FOR TIRED, ACHING FEET

FACTORY 70 WINTER ST.

WORCESTER, MASSACHUSETTS, U. S. A.

Retail Store 415 Main St.

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

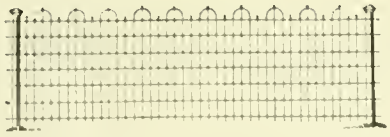
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER'S LEADING HARDWARE STORE—DUNCAN & GOODELL COMPANY, 404 MAIN STREET

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

AMERICAN PUBLICITY COMPANY

ADVERTISING SIGNS

CORNER AUSTIN AND HIGH STREETS
WORCESTER

Carlton Engraving Co.

418 MAIN STREET, WORCESTER

Covers the Whole Field of Photo-Engraving

Makes the highest quality HALFTONES from Wash Drawings or Retouched Photographs; Color Process direct from the object, insuring absolute fidelity of detail; Wax Process for Maps, Mechanical Diagrams and intricate rule work; Zinc Etchings and Coarse Screen Halftones for Newspaper and Advertising use; Specializes in Bird's-Eye Views of Mill and Factory Plants reproduced in Halftone, or the Art Gelatine Process for framing; Photograph Machinery, Views, Interiors and Specialties in Manufactured Goods, with special reference to the requirements for reproduction.

The Creative Department is at your Service for Ideas, Suggestions, Sketches, Drawings and Photographs

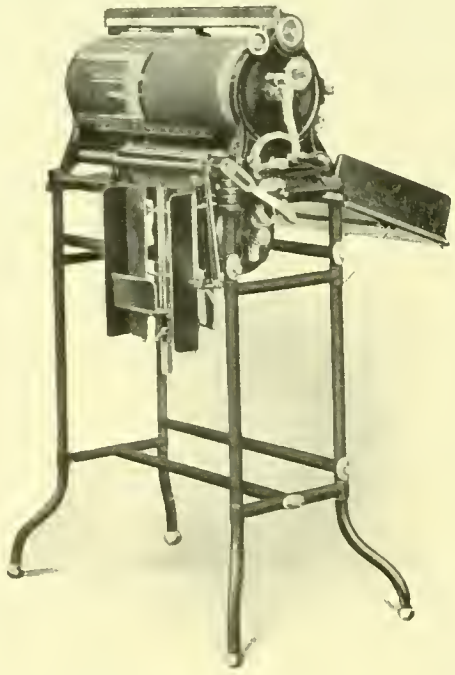
And best of all, the Carlton Engraving Company *sells Satisfaction*

Your Orders Solicited

"Multigraphing"

"Nothing Succeeds Like Success"

I Am Succeeding Let Me Help You



As a Business Getter

Multigraph Letters COMMAND ATTENTION and BRING RESULTS *Because they are Individually Written* and each is a PERSONAL APPEAL. They have been known to bring *90% REPLIES.*

Three-fourths of the prominent advertisers of this country are using these Form Letters for "Follow Up" purposes.

Let our Multigraph Form Letters MAKE and SAVE money for YOU in your business.

WORCESTER MAILING CO.

STATE MUTUAL BUILDING Grace L. Belknap, Propr.

Telephones: Office, 3480; Residence, 1299-6

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1908 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

The Marvin Press

ALL KINDS OF
JOB PRINTING

Art Calendars a Specialty

If you intend to advertise YOUR BUSINESS in this way during 1911

Wait for Our Representative

We do business here. Our prices are right.

OXFORD, MASS.

Telephone 7-5

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

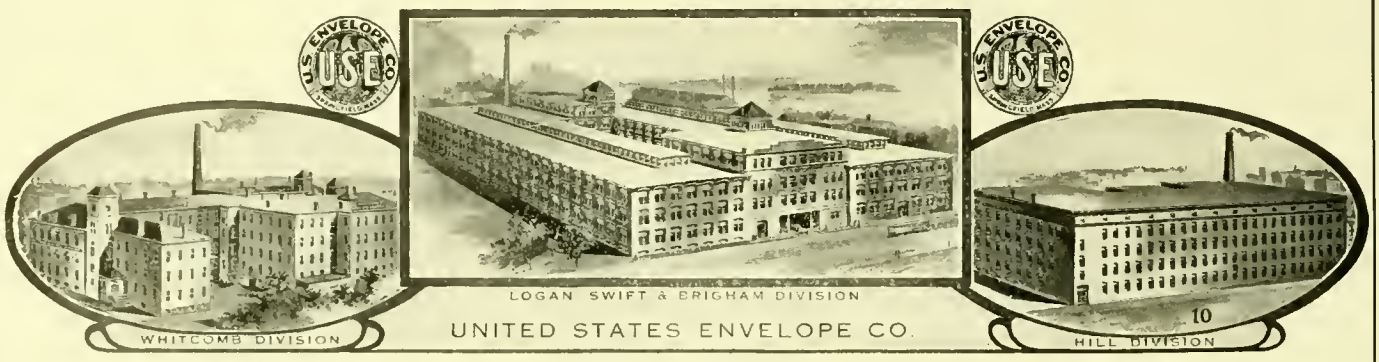
Springfield — Court Square Building
Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

United States Envelope Company

Manufacturers of Standard **Envelopes**



The Outlook Envelope

Insures economy and absolute accuracy in the addressing of all your mail matter.

The Improved

Columbian Clasp Envelope

The best and most satisfactory merchandise envelope made.

Specialists in STEEL DIE STAMPING

or Commercial Work. Samples and Prices of our Standard Goods furnished by your Stationer or Printer

Made in Worcester.

Made in Worcester.

A DOLLAR Bill and a Two Dollar Bill can be produced by the Government at about the same price—a few cents each. The face value of one is 100 cents; the other is just double that amount

It is the Face Value that Counts

It is the face value of your **Printed Matter** that counts—your office stationery your advertising booklets and catalogs.

Different shops will produce certain jobs at about the same price; but there will be a difference in the face value.

If it is "face value" you are interested in, then we are interested in you.

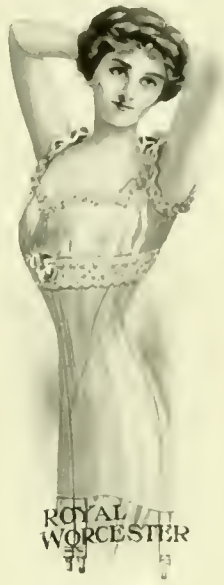
THE COMMONWEALTH PRESS, 50 Foster St.

The Commonwea PRE OLIVER B W WORCEST MASS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

STYLE 563

STYLE 633



STYLE 504

STYLE 450

THE most popular and best *medium priced* corsets made and sold in America are those bearing the trade mark name ROYAL WORCESTER. This has been so for nearly fifty years. These Internationally famous

ROYAL WORCESTER CORSETS

are the product of our home city and emanate from one of the largest and most perfectly equipped corset factories in existence. Every ROYAL WORCESTER corset is an *original conception* designed upon *correct lines*, and fashioned from the *best materials* with painstaking care by skilled workpeople.

They are made in varying heights and lengths suited to the needs of every type of figure

MODEL 908

We have in stock a complete line, including all the new 1910 models, at PRICES $1 to $3.

Also we have a superb assortment of the ultra-fashionable BON TON corsets at $3 to $12, and the well-known ADJUSTO Reducing Corsets, with patented "adjusting bands," at $3 and $5.

SOLE WORCESTER SELLING AGENTS

FOR ALL THE ABOVE CORSETS

BOSTON STORE
Denholm & McKay Co.

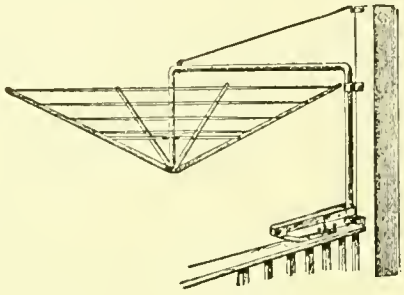
WORCESTER, MASS.

MODEL 901

The VICTOR Improved

Roller Bearing Clothes Reels

Ash
Chutes,
Sifters,
Etc.

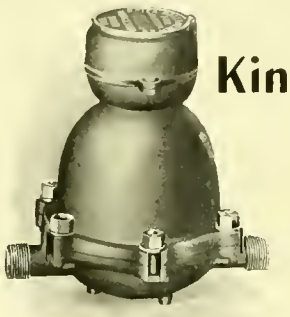


Manufactured by **The R. W. Robinson Co.**

86 Foster Street

Telephone 6019 — Agents Wanted

Made in Worcester.



The King Disc Meter

COMBINING

Best Material and Workmanship

CONTRACTORS, PATRONIZE HOME INDUSTRY

Union Water Meter Company

Worcester, Mass.

See our exhibit, Section 8, at Mechanical, Industrial, and Textile Exposition, Feb. 5 to 12.

Made in Worcester.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

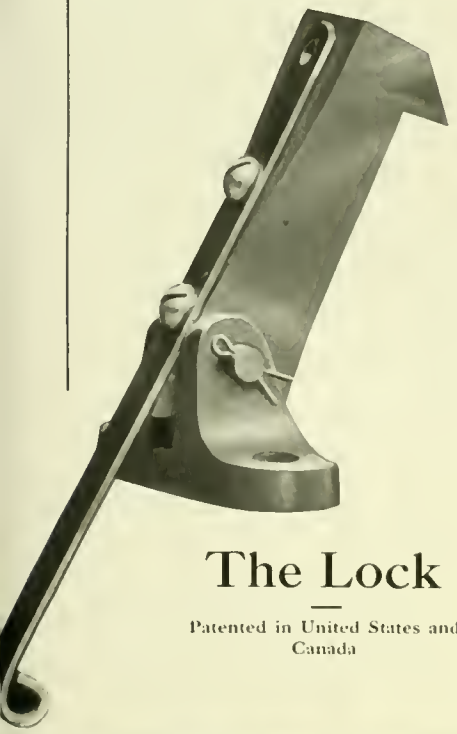
ANGLES AND CHANNELS

BLACKSMITH & CARRIAGE HARDWARE,

JUNCTION OF BRIDGE, MECHANIC AND FOSTER STREETS

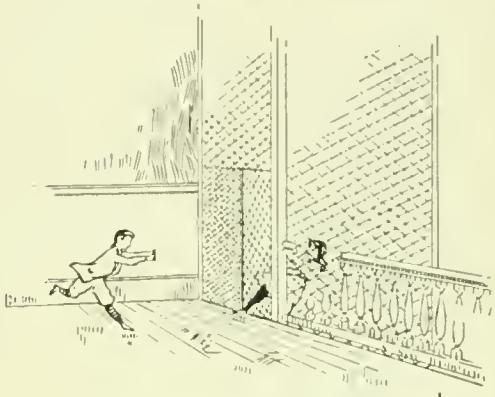
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Prevents Accident



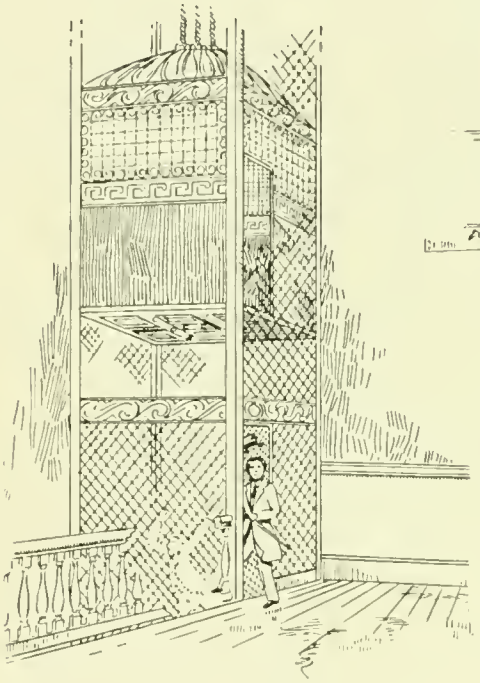
Simple
Positive

Door cannot be opened unless car floor is at landing



The Lock

Patented in United States and Canada



Its Application

Elevator ascending, about to engage the lock

A few of the Accidents The Stevens Automatic Elevator Door Locks will prevent

Can be found in use at the Aurora Hotel; The Warren; Hotel Newton; The Buckingham; The Kensington; The Rawson and Gibbs; Standish Apartments, etc., in Worcester.

Massachusetts Mutual Ins. Building, Springfield; The Johnsonia, Fitchburg; Hotel Belmont, New York City; Hotel Essex, Boston; Massachusetts Building, Boston; Houghton & Dutton, Boston; Stearns Building, Hartford.

The Stevens Automatic Elevator Door and Gate Lock

Manufactured by

C. F. Stevens Lock Co.

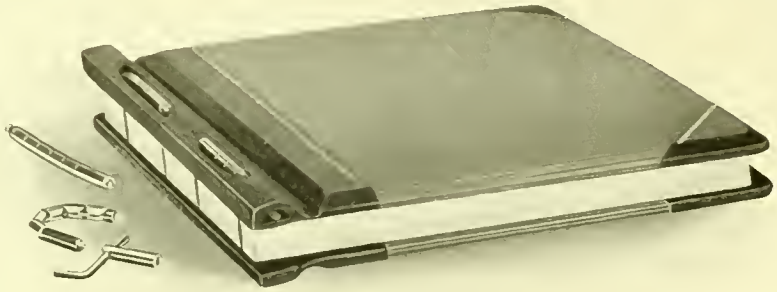
656 Main Street
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

WHY NOT USE THE BEST?

"DeLUXE" FLEXIBLE POST BINDER FOR TRANSFER LEDGERS AND OTHER PURPOSES IS IT



WHY?

TRY ONE AND SEE

MADE FOR ANY SIZE SHEET, WITH POSTS ON EITHER EDGE. NO LIMIT TO CAPACITY—JUST ADD SECTIONS

NOTICE THE POSTS LIE FLAT

MANUFACTURED BY

OFFICE SPECIALTIES DeLUXE (INC.)

AUSTIN AND HIGH STREETS WORCESTER, MASS.

THE AURORA

About fifty yards north of Odd Fellows' Hall. A select high-grade Family Hotel, thoroughly up-to date. Rooms single or en suite; furnished or unfurnished. *Special rates for a prolonged stay.*

656 MAIN STREET, WORCESTER, MASS. C. F. STEVENS, *Proprietor*

THE THREE LEADING HOTELS OF WORCESTER MEMBERS OF THE NEW ENGLAND : : HOTEL MEN'S ASSOCIATION : :

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

THE

Bay State House

In the Banking District, and one block from Mechanics Hall and Worcester's leading theatre

European Plan Club Breakfasts

Long Distance Phones in Every Room

283 MAIN STREET

G. A. KEELER, Formerly of Hotel Essex, Boston

Opposite City Hall Park

New Park Hotel

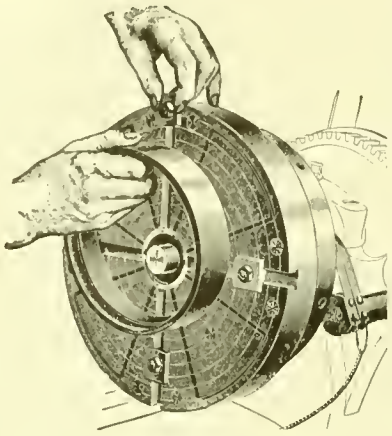
Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather · Mill Strapping · Rubber Belting
Canvas Belting · Belt Lacing · Belt Hooks
Wood Split Pulleys

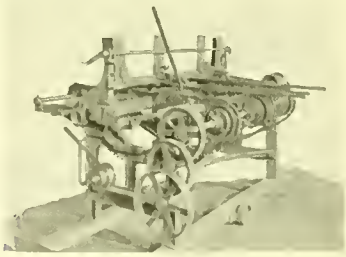
Office and Factory, 1-3 Eaton Place.

Made in Worcester.

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street. Worcester, Mass.

Made in Worcester.



COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

Absolutely Pure

Sparkling Polar Water
and
White Seal Ginger Ale
BOTTLED AT THE SPRING

Full line of
Carbonated Beverages

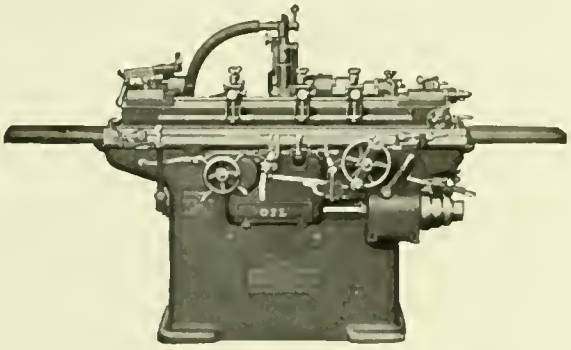
Pure Syrups and
Saratoga Natural Gas

Leicester Polar Spring Co.
28 Myrtle St. Telephone
C. H. CLARENDEN, Mgr.

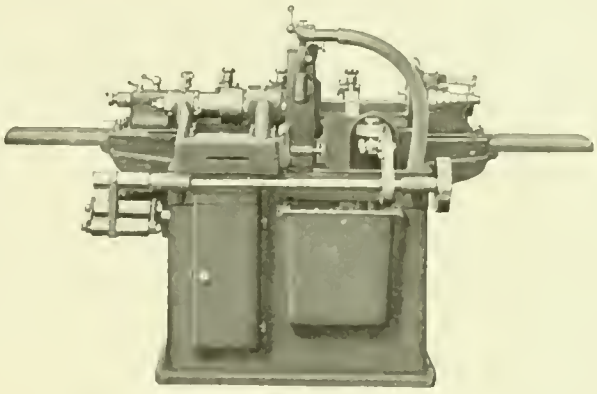
Polar Spring Water on Draught at Board of Trade Rooms

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



6″ x 32″ Front View.



6″ x 32″ Rear View

A Commercial Grinding Machine

is one with which you can produce both **Fine Finish** and **Rough Finish**; both Heavy Cuts and Light Cuts,

ACCORDING TO YOUR NEEDS.

We demonstrate at our own expense

SEE OUR
EXHIBIT
At MECHANICS Hall

AGENTS—

Vonnegut Hardware Co., Indianapolis.
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.
Motch & Merryweather Mchy. Co., Cleveland, Detroit and Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver.
Henshaw, Bulkley & Co., San Francisco and Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan.

NORTON GRINDING CO.

WORCESTER, MASS.

Norton Alundum Plant
Niagara Falls, N. Y.

Works of
Norton Co. and
Norton Grinding Co.
Worcester, Mass.

Norton Grinding Wheels are known and used in all parts of the world

Grinding Machinery
Rubbing and Sharpening Stones

Glass Cutting Wheels
Scythe Stones

Razor Hones
India Oil Stones

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

J. W. BISHOP COMPANY CONTRACTORS

Ten-Class Dormitory, Princeton University, Princeton, N. J.

BENJAMIN WISTAR MORRIS, JR.
ARCHITECT

J. W. BISHOP CO.
BUILDERS

WORCESTER BOSTON NEW YORK PROVIDENCE NEW BEDFORD

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

Manufacturers of

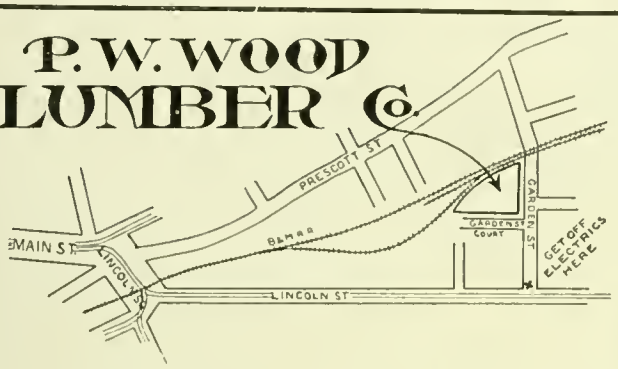
LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.

P. W. WOOD LUMBER Co.



SUCCESSORS TO WORCESTER LUMBER CO.

All kinds of

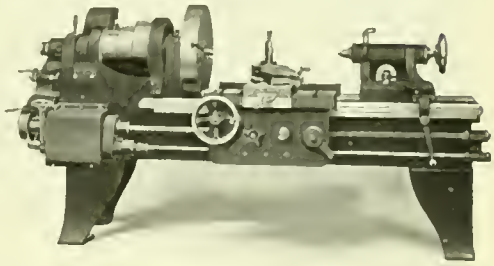
LUMBER

For Building and Shop Work carried in Stock

Telephone 3095

11 GARDEN ST.,
WORCESTER, MASS.

Start Right



Get good photographs and the rest will follow.

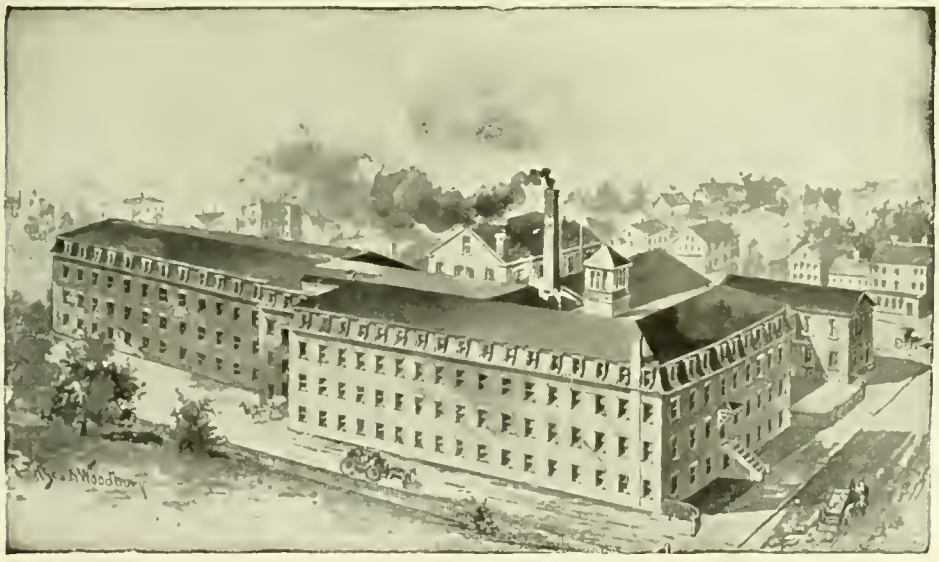
E. B. LUCE

Expert photographer of machinery, tools and all commercial work

At Exposition Feb. 5-11

TELEPHONE

Walker Building



Hammond Reed Company

Manufacturers of

Organ Reeds,
Reed Boards
and other
Organ Supplies

Telegraph and Cable Address,
"Reeds," Worcester, Mass., U. S. A.

WORCESTER, MASS.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

MARCUS L. FOSTER, Pres. and Treas. HENRY H DYKE, Gen. Manager

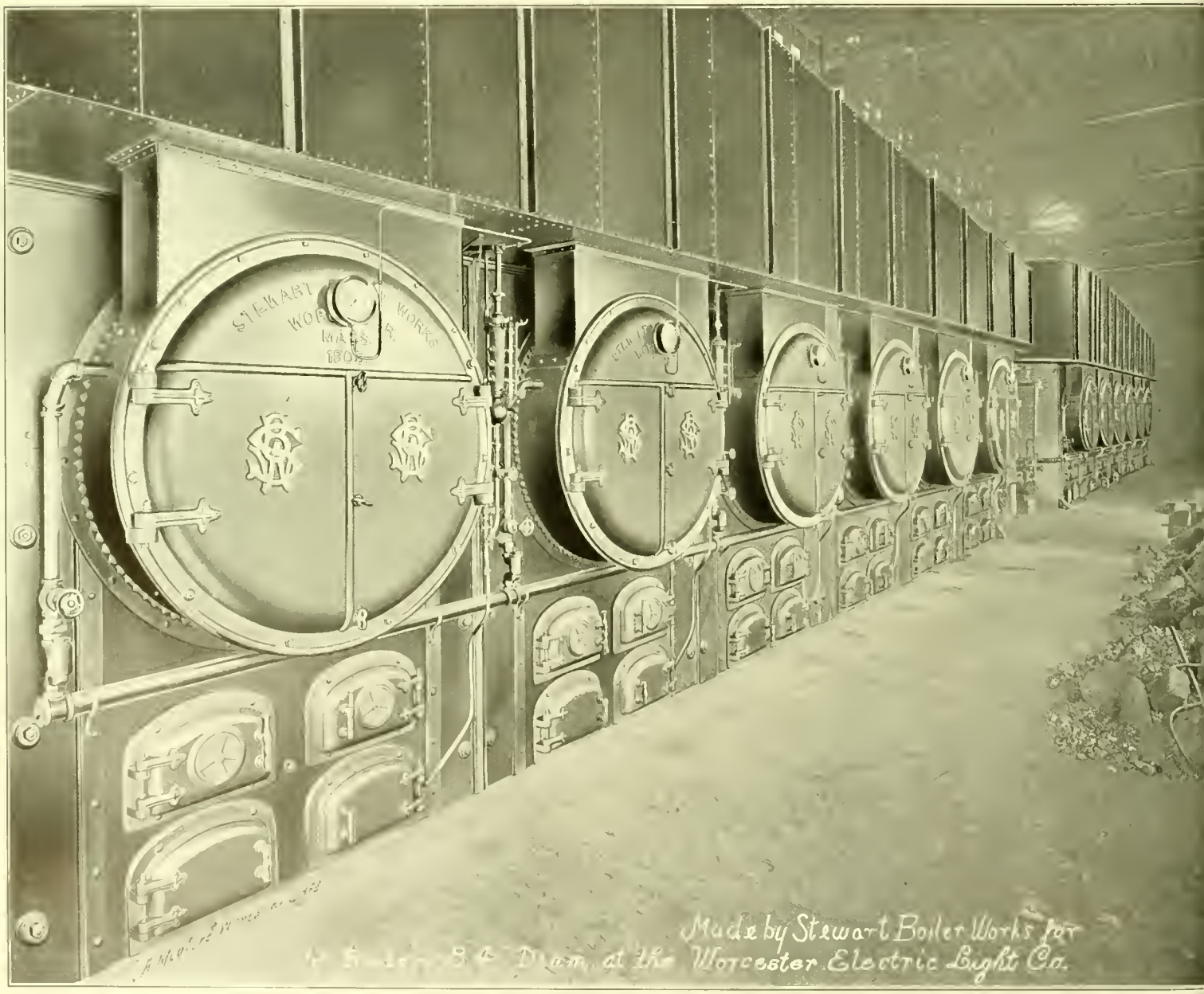
STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.



Each Boiler is 84 in. diam., 19 ft. 9 in. long, having 138 tubes 3½ in. diam., 18 ft. long. Plates are ⅝ in. thick, with Quadruple riveted (8 rows) Butt Strap Joints on the straight seams for 170 lbs. working pressure. Boilers are set in 2 Batteries and there are 2 Chimneys with separate Smoke Flue Connection.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings,
Ball Bearings

Steam-Pipe Collars

Ferrules and
Sheet Metal Specialties

Case Hardening

Nickel, Copper and
Brass Plating

also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Walter J. Stone

Stone & Berg Lumber Co.

Successors to JOHN GATES' SONS

EVERYTHING IN

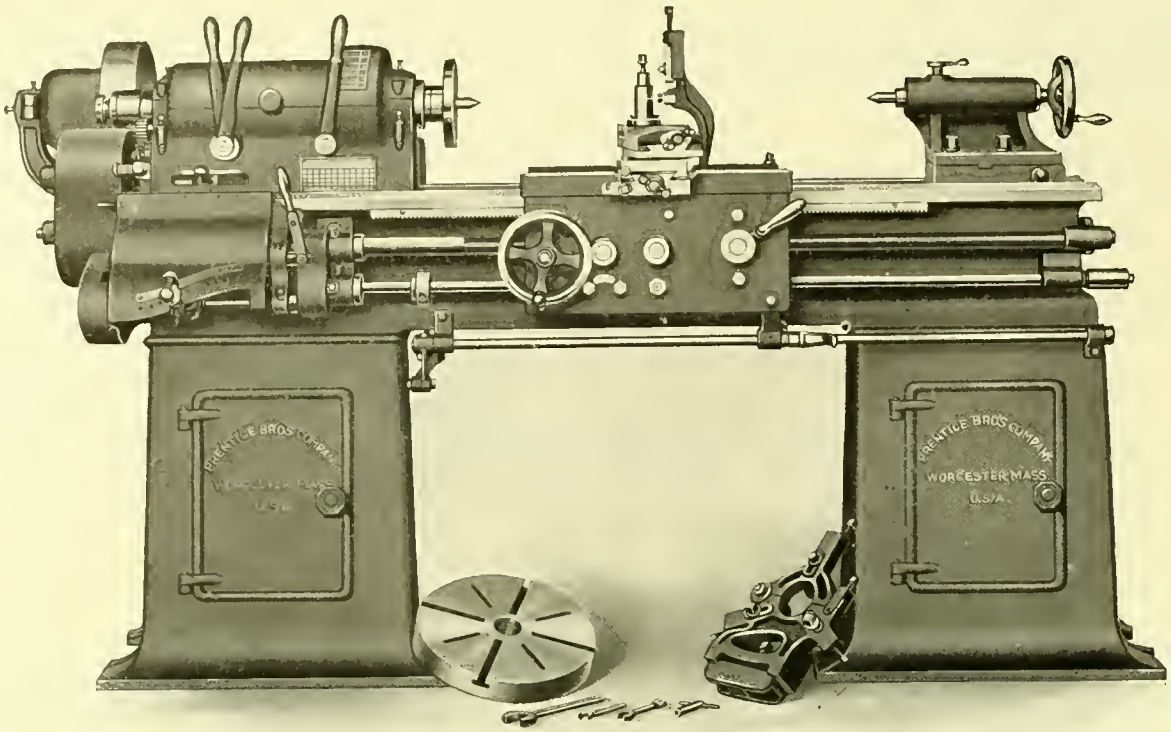
LUMBER

Telephone 3704

181 Union Street Worcester, Mass.

August M. Berg

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets

Worcester, Massachusetts

Made in Worcester.

Progress Pictures
Erwin Cotton Mills

Durham, N. C.

F. P. SHELDON & SONS
Engineers

Interior Spinning Mill. 200′ x 518′

Weave Shed. 300′ x 300′

FISKE-CARTER CONSTRUCTION CO.

Builders

Worcester, Mass.

OFFICES
11 Foster Street
Spartanburg, S. C. Greenville, S. C.

WINSLOW'S Skates

The best skaters and the best rinks everywhere will have none but Winslow's.

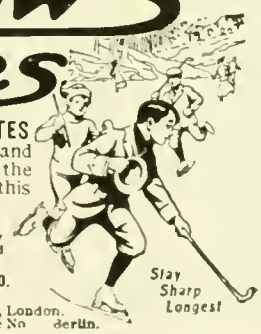
THE BEST ICE AND ROLLER SKATES
Superior in material, in finish and durability. Over 50 years as the world's standard has clinched this fact.

All Models, All Sizes, All Dealers.

Please write for new illustrated catalogues. They are free. Kindly state whether you are interested in ice or roller skates.

THE SAMUEL WINSLOW SKATE MFG. CO.
WORCESTER, MASS., U. S. A.

84-86 Chambers St., New York.
No. 64 Avenue de la Grande Armée, Paris.
8 Long Lane, E. C., London.
Potsdamer Strasse No derlin.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xx
American Car Sprinkler Co., car sprinklers, v
American Narrow Fabric Co., iii
American Publicity Company, xii
Aurora, The, xviii
Bay State House, xix
Bishop Co., J. W., xxii
Blake, Jr., & Co., George F., iron and steel, and supplies, xvi
Blanchard & Co., F. S., printers, Back cover
Brierly-Lombard Company, xa
Brownell, George L., twisting and spinning machinery xxviii
Carlton Engraving Co., xii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, xiv
Crompton & Knowles Loom Works, looms, Inside back cover
Cummings Shoe Co., Worth cushion shoes, xiv
Davis & Riggs, commercial photographers xx
DeLong, W. H., dental disks, xx
Duncan & Goodell Company, xi
Fiske-Carter Co., general contractors, xxvii
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Clothing Co., xa
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxiii
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Heywood Boot & Shoe Co., fine shoes, iv
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xxvi
Hudson Belting Co., leather belting, xx
Jackson St. Foundry, iron castings, xxv
Kidder, R. E., drawing tables, v
Leicester Polar Spring Co., xx
Luce, E. B., commercial photographer, xxiii
Marvin Press, The, xiii
Morgan Construction Co., rolling mill equipment, vi
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxv
Multiple Woven Hose & Rubber Co., fire hose and belting xxviii
New England Audit Co., xiii
New Park Hotel, xix
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xxi
Norton Grinding Co., grinding machines, xxi
Office Appliances DeLuxe, Inc., xviii
People's Savings Bank, x
Pond Machine & Foundry Co., vii
Pratt & Inman, iron and steel, xvi
Prentice Bros. Company, drilling machines, engine lathes xxvi
Provident Life & Trust Co., xiii
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robinson Co., The R. W., xvi
Royal Worcester Corset Co., xv
Sherman Envelope Co., envelopes and specialties, v
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxv
State Mutual Life Assurance Co., iii
Stevens Lock Company, C. F., xvii
Stewart Boiler Works, xxiv
Stockbridge Machine Co., shapers, x
Stone & Burg Lumber Co., xxv
Stone & Foster Lumber Company, xxiv
Snyder & Son, J. E., upright drills, i
United States Envelope Co., xiv
Union Water Meter Co., water meters, xvi
Walker & Co., O. S., chucks, xx
Warren Hotel, The, xix
Warren, J. F. & W. H., leather belting and mill supplies xxiii
Wheelock Fence Company, xi
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, i
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxviii
Williams & Bridges, wooden and paper boxes, xxv
Winslow Skate Co., ice and roller skates, xxvii
Wire Goods Co., wire hardware, Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., x
Wood Lumber Co., P. W., xxiii
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Machine Screw Co., set, cap and machine screws, xxvii
Worcester Mailing Company xii
Worcester National Bank, ii
Wright Wire Co., wire and wire cloth, wire rope, etc. ii
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

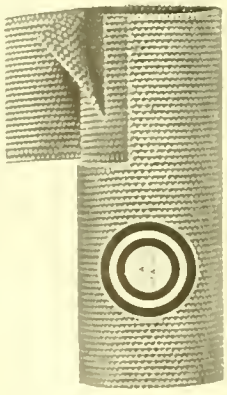
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

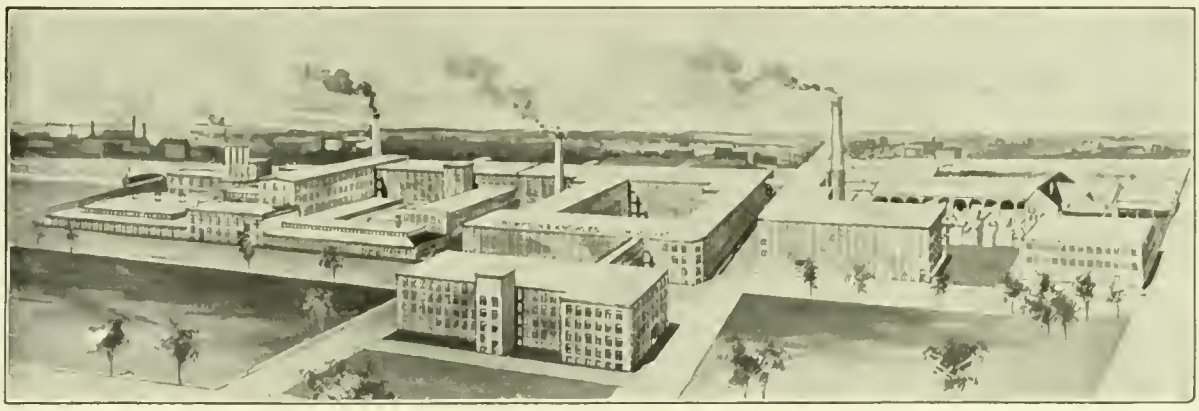
SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC



WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

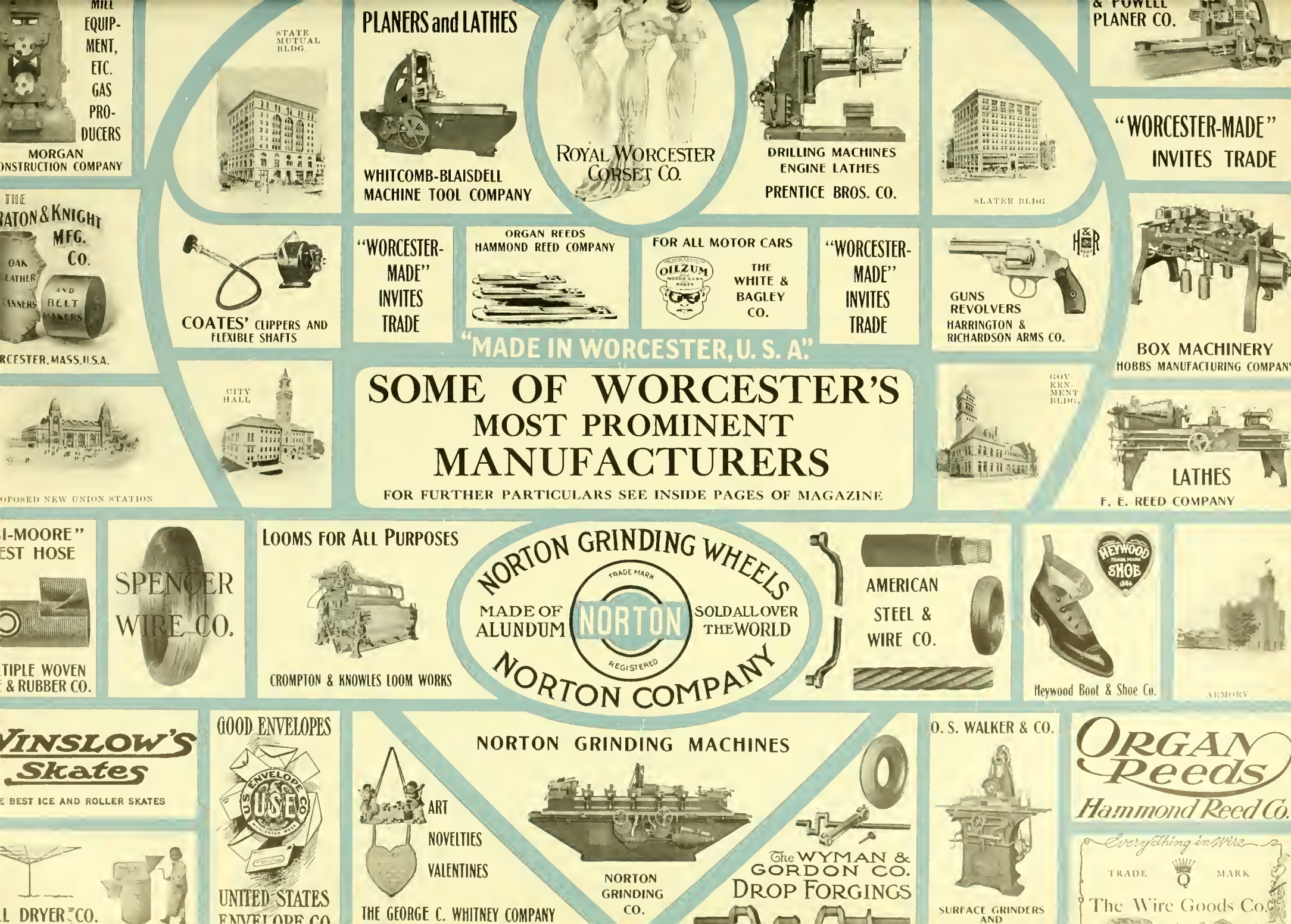
CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

Fishing for Business

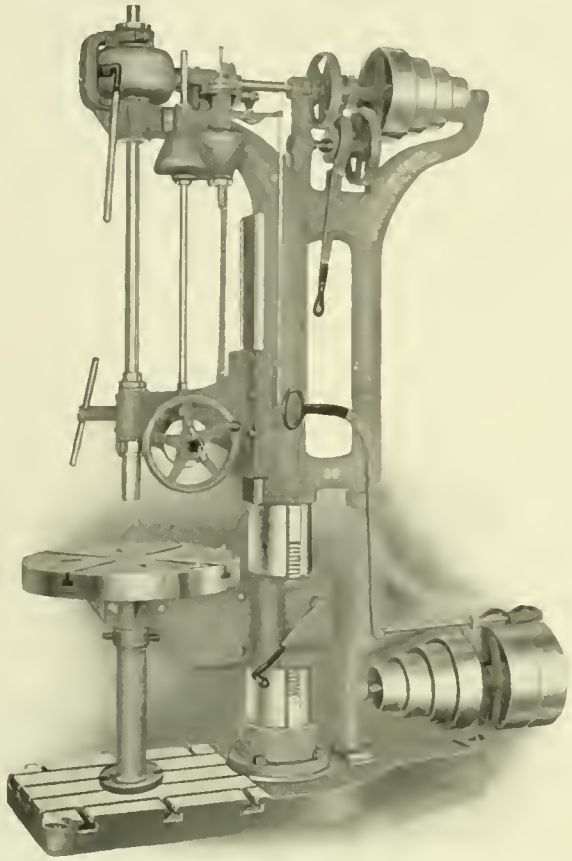
SUCCESSFUL salesmanship is based on attractive personality. The salesman's manner, style, clothes and voice all count, and very often help or hurt his chances before you know what he has to sell. More sales are effected by printed solicitations than by personal solicitations, and all the highly successful advertising men know the vital importance of introducing attractive personality into their Printing. Every time they order Printing they should think of this. Put *Good Bait* into your Printing. The Printed Bait that catches only Suckers is sold to those who will not pay for Good Bait. These get what they pay for. There are as many grades of effectiveness in Printing as in boots and shoes and clothing. If you pay for shoddy clothes you get them, and no matter how cheap they are they will always be a bad bargain.

F. S. Blanchard & Co., Worcester, Mass.


MILL EQUIPMENT, ETC. GAS PRODUCERS
MORGAN CONSTRUCTION COMPANY
STATE MUTUAL BLDG.
PLANERS and LATHES
WHITCOMB-BLAISDELL MACHINE TOOL COMPANY
ROYAL WORCESTER CORSET CO.
DRILLING MACHINES ENGINE LATHES
PRENTICE BROS. CO.
& POWELL PLANER CO.
SLATER BLDG.
"WORCESTER-MADE" INVITES TRADE
THE RATON & KNIGHT MFG. CO.
OAK LEATHER TANNERS AND BELT MAKERS
WORCESTER, MASS. U.S.A.
COATES' CLIPPERS AND FLEXIBLE SHAFTS
"WORCESTER-MADE" INVITES TRADE
ORGAN REEDS HAMMOND REED COMPANY
FOR ALL MOTOR CARS
OILZUM
THE WHITE & BAGLEY CO.
"WORCESTER-MADE" INVITES TRADE
GUNS REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.
BOX MACHINERY
HOBBS MANUFACTURING COMPANY
"MADE IN WORCESTER, U. S. A."
SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS
FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE
CITY HALL
OPOSED NEW UNION STATION
GOVERNMENT BLDG.
LATHES
F. E. REED COMPANY
"I-MOORE" EST HOSE
TIPLE WOVEN & RUBBER CO.
SPENCER WIRE CO.
LOOMS FOR ALL PURPOSES
CROMPTON & KNOWLES LOOM WORKS
NORTON GRINDING WHEELS
MADE OF ALUNDUM
TRADE MARK NORTON REGISTERED
SOLD ALL OVER THE WORLD
NORTON COMPANY
AMERICAN STEEL & WIRE CO.
HEYWOOD SHOE
Heywood Boot & Shoe Co.
ARMORY
WINSLOW'S Skates
E BEST ICE AND ROLLER SKATES
GOOD ENVELOPES
US ENVELOPE CO. USE
UNITED STATES ENVELOPE CO.
NORTON GRINDING MACHINES
ART NOVELTIES VALENTINES
THE GEORGE C. WHITNEY COMPANY
NORTON GRINDING CO.
The WYMAN & GORDON CO.
DROP FORGINGS
O. S. WALKER & CO.
SURFACE GRINDERS AND
ORGAN Reeds
Hammond Reed Co.
Everything in Wire
TRADE MARK
The Wire Goods Co.
L DRYER CO.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

WORCESTER, MASS., U. S. A.

SECOND-BELT DRIVE PLANERS

are peculiarly adapted to all classes of work requiring speed and accuracy, as they do away with all shock and jar, and results are large and finish perfect.

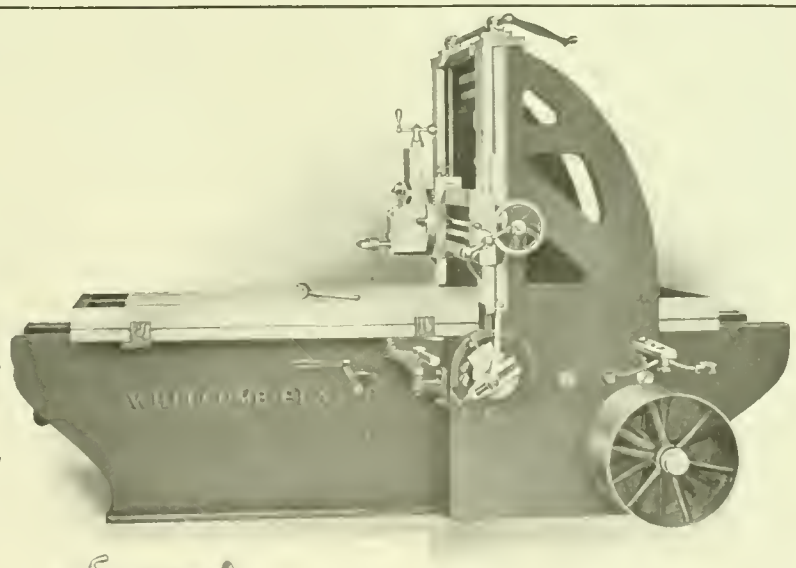
WHITCOMB

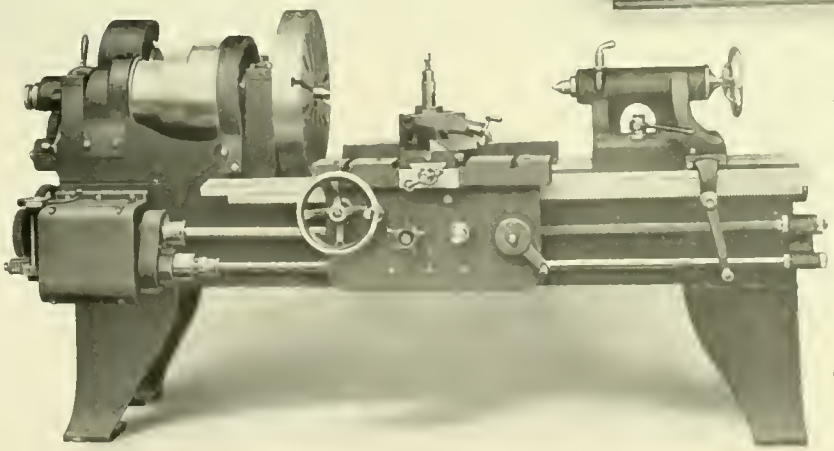
Planers

17″ 22″ 24″ 26″ 30″

Lathes

13″ 16″ 18″ 20″ 24″





THREE-STEP CONES, DOUBLE BACK GEARS

make these lathes rank among the greatest producers in their line.

Satisfaction Guaranteed

BLAISDELL

Whitcomb-Blaisdell Machine Tool Co.

Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

INCORPORATED 1868

Worcester Trust Company

Capital, Surplus and Profits - - $1,300,000
Total Resources - - - 10,000,000

IN ADDITION TO A GENERAL BANKING BUSINESS
IS AUTHORIZED TO ACT AS
EXECUTOR, ADMINISTRATOR, GUARDIAN, TRUSTEE

CITY HALL BRANCH
448 MAIN STREET

MAIN OFFICE
342-344 MAIN STREET

LINCOLN SQ. BRANCH
11 MAIN STREET

MAIN OFFICE, 342-344 MAIN STREET

WILLIAM D. LUEY, *President*

HENRY A. MARSH, HENRY P. MURRAY, *Vice-Presidents*

SAMUEL H. CLARY, *Treasurer* ALVIN J. DANIELS, *Secretary*

Directors

CHARLES S. BARTON
GEORGE F. BLAKE
A. GEORGE BULLOCK
JOHN H. COES
ALEXANDER DEWITT
THOMAS B. EATON
WILLIAM ENDICOTT, JR.
HENRY F. HARRIS
CHARLES H. HUTCHINS
LINCOLN N. KINNICUTT
EDWIN T. MARBLE
J. RUSSEL MARBLE
A. W. PARMELEE
NEAL RANTOUL
WILLIAM H. SAWYER
FRANK BULKELEY SMITH
CHARLES M. THAYER
ROBERT M. WASHBURN
GEORGE W. WELLS
M. J. WHITTALL
G. MARSTON WHITIN
ROBERT WINSOR
A. O. YOUNG

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"DE VARS" Quality

"DE VARS" American Maid Hose-Supporters

"DE VARS" E. Z. B. Suspenders

"DE VARS" Pinon Dress Shields

Made in all sizes and styles

Remember that "DE VARS" is on the BEST Hose-supporters, Suspenders and Shields

American Narrow Fabric Co.

MANUFACTURERS

Worcester, Mass.

SEATTLE CHICAGO NEW YORK BALTIMORE

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

BARRETT, SNOW & ARNOLD, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Bank Block

Interior Banking Rooms

The Oldest Bank in Worcester

Worcester National Bank

11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

Flower Bed Guard
Trellis
Tree Guards
Trellis Arches
Park Baskets

Galvanized by our Rust Proof Process.

Ornamental Wire and Iron Fences and Gates

WAREHOUSES:
Boston,
New York, Philadelphia
Chicago, San Francisco
Made in Worcester.

WRIGHT WIRE COMPANY

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL'S CHAMPION LAWN CLOTHES DRYER

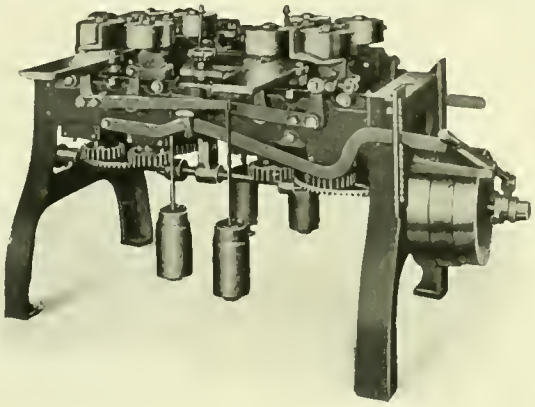
Made in Worcester.

HILL'S BALCONY CLOTHES DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

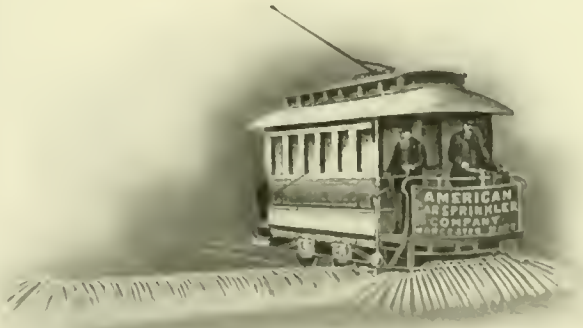
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Found at Last!

A boring machine for wood built on the right principle. Workmanship and material the best. New features.

Send for circular.

R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

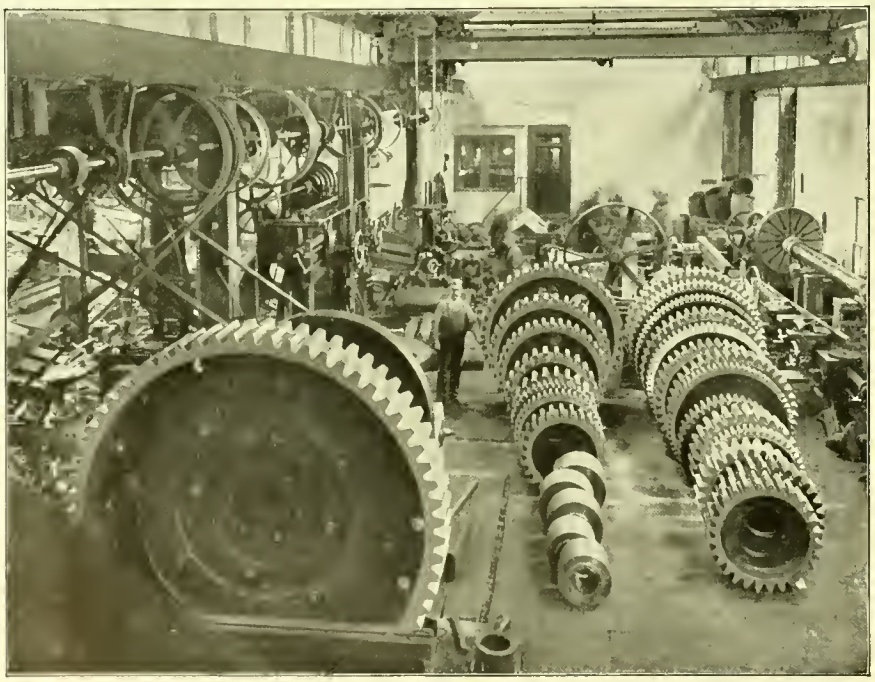
Craig Street Facade, Bank of Montreal, Montreal, Quebec
McKim, Mead & White, Architects.

The Norcross Brothers Company, Builders.

The Norcross Brothers Company

General Contractors and Builders

New York
Boston
Providence
Washington
Worcester



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made In Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

HIGH GRADE GREY IRON CASTINGS

OUR CASTINGS

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings
up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co., Gold and Assonet Sts., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

[vii]

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

This plant, with nine acres of floor space, gives employment to about 1,200 hands, and is conceded to be the best equipped plant in the world for tanning leather and manufacturing same into leather belting.

Leather belting, however, does not constitute the entire output of this plant. Belt lacing, strapping, leather packings, and other leather specialties are also produced in large quantities.

Buyers of belting, belt lacing, packings, strapping, and leather specialties of various kinds will find it profitable to get our prices before placing orders elsewhere.

The Graton & Knight Mfg. Co.
Oak Leather Tanners and Belt Makers
Worcester, Mass., U.S.A.

Branches: Atlanta, Boston, Chicago, Milwaukee, Minneapolis, New York, Philadelphia, Portland, Ore., Seattle, St. Louis, San Francisco

This view of the Graton & Knight Mfg. Co.'s exhibit at the Worcester Mechanical and Electrical Exposition shows, in connection with leather belting, some of the many leather specialties made by this company.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1908 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

The Marvin Press

ALL KINDS OF
JOB PRINTING

Art Calendars a Specialty

If you intend to advertise YOUR BUSINESS in this way during 1911

Wait for Our Representative

We do business here. Our prices are right.

OXFORD, MASS.

Telephone 7-5

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield
Court Square Building

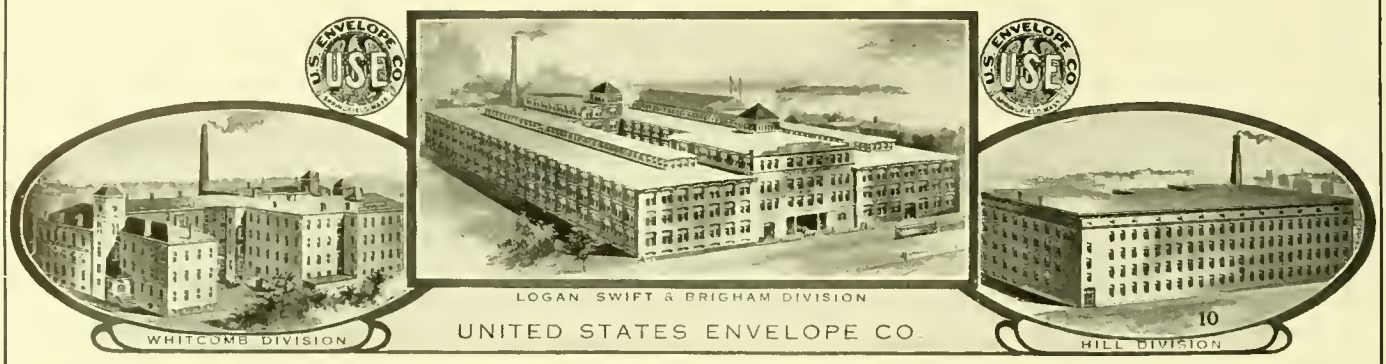
Worcester
State Mutuel Building

Prospectus conteining one hundred references mailed upon request.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

United States Envelope Company

Manufacturers of Standard **Envelopes**



The Outlook Envelope

Insures economy and absolute accuracy in the addressing of all your mail matter.

The Improved

Columbian Clasp Envelope

The best and most satisfactory merchandise envelope made.

Specialists in STEEL DIE STAMPING

or Commercial Work. Samples and Prices of our Standard Goods furnished by your Stationer or Printer

Made in Worcester.

The "Bunion" Shoe

The only shoe made that will fit the foot with a bunion or enlarged joint

REGISTERED

In United States Patent Office

Look for the trade-mark

Heywood Boot & Shoe Company

Manufacturers

Worcester, Massachusetts, U.S.A.

Factory
70 Winter Street

Retail Store
415 Main Street

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Professional and Amateur Photographic Apparatus, Materials and Chemicals

Photographic Supplies for factories, schools and engineers

A complete line of Cameras and requisites for amateur photographers

Developing and Printing

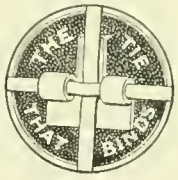
Wheaton & Bowers

Photographic Department

366 Main Street, Worcester

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

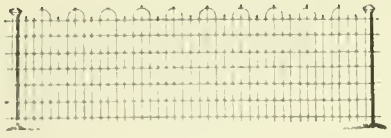
SEE OUR INSERT OPPOSITE PAGE 20



NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

AMERICAN PUBLICITY COMPANY

ADVERTISING SIGNS

CORNER AUSTIN AND HIGH STREETS
WORCESTER

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

If your dealer cannot furnish, write to

Standard Manufacturing Company

186 Union Street, Worcester, Mass., U.S.A.

AN EMPLOYMENT AGENCY
THAT IS WORTH WHILE

for supplying all kinds of OFFICE ASSISTANTS; one of the better kind—one that is of real assistance to the employer—where each applicant's case is very carefully considered.

An agency from which an employer can expect REAL help.

No charge is made to employers for the service. Ask to have me call upon you.

RALPH H. HOWE

Office at Builders' Exchange, 518 Main St.

TELEPHONES

Office 744 Residence 3729-1

Carlton Engraving Company

418 Main Street, at Worcester's busiest corner, has the credit of making the first public use in Worcester of an Aeroplane, the modern flying-machine; a record in innovation consonant with other particulars of the business to our credit.

Our thirty-foot, up-to-date publicity "flyer" attracted universal attention at the Mechanical Exposition of 1910. It told an eloquent story (see frontispiece in this Magazine) which we'd like now to prove to you, that

We Cover the Whole Field of Photo-Engraving, Specializing in Halftones and Aero Views of Factory Plants, and are High Flyers in Quality and Service

418 Main Street is the landing station

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Your Catalog

¶ Just a word about that catalog of yours.

¶ If it is intended to act as a salesman and sell your goods, why not have it attractive and clothed in proper form? Successful houses do not send out their representatives clad in overalls and jumpers.

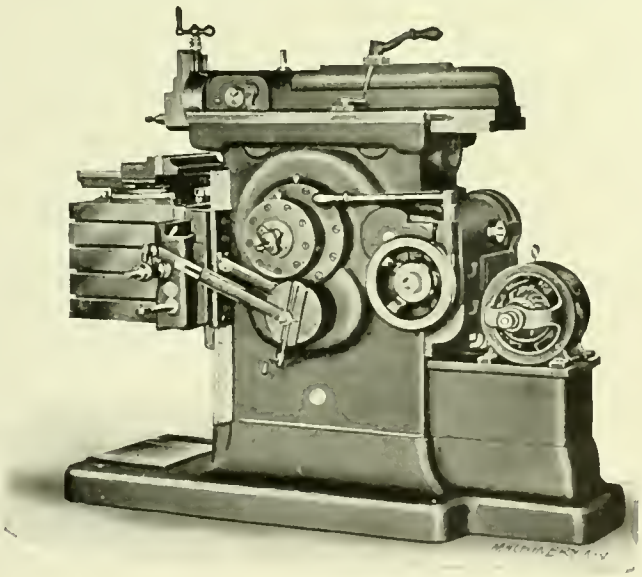
¶ We have the equipment and "know-how" to take your copy, arrange it in proper form, select the right kind of type, paper, ink and cover and blend them into one harmonious whole, which, when finished, will give it that exclusive character known as **"style."** We are constantly doing it for the most fastidious buyers in New England. We can do it for you. We don't have to tell you what we **will** do, but can show you what we **have** done.

The Commonwealth Press

Oliver B. Wood

50 Foster St., Worcester, Mass.

18″ All-Geared Drive Shaper



A Shaper because of the quantity and quality of work that it will turn out puts shaper-production on a new and higher level.

STOCKBRIDGE MACHINE CO.

WORCESTER, MASS.

ADJUSTO

REDUCING CORSETS

are presented for 1910, showing the famous "adjusting bands" (patented) with the new **extension tabs** and **supporter loops.** Each tab or reducing band extends to bottom edge of corset, where it is joined to one end of an elastic loop, the other end of which is attached to the corset skirt.

The hose supporter is attached to this loop through a sliding ring, and when fastened to the hose *holds down* band and corset skirt *smooth* and *flat.* Thus a far greater reduction of abdomen, hips and upper limbs is accomplished than heretofore, and the wearer enjoys the *utmost* support and comfort. PRICE $3. Ask our corset specialists.

AGENTS ALSO FOR THE FAMOUS

ROYAL WORCESTER CORSETS $1 TO $3

AND BON TON CORSETS $3 TO $12

BOSTON STORE

Denholm & McKay Co.

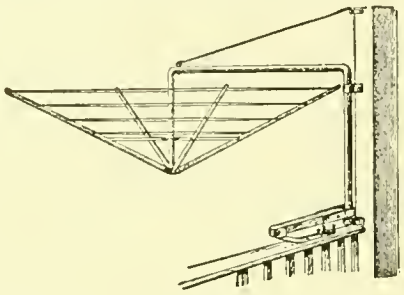
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The VICTOR Improved

Roller Bearing Clothes Reels

Ash
Chutes,
Sifters,
Etc.



Manufactured by **The R. W. Robinson Co.**

86 Foster Street

Telephone 6019 — Agents Wanted

Made in Worcester.

The King Disc Meter

COMBINING

Best Material and Workmanship

CONTRACTORS, PATRONIZE HOME INDUSTRY

Union Water Meter Company

Worcester, Mass.

See our exhibit, Section 8, at Mechanical, Industrial and Textile Exposition, Feb. 5 to 12.

Made in Worcester.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

ANGLES AND CHANNELS

BLACKSMITH & CARRIAGE HARDWARE

JUNCTION OF BRIDGE, MECHANIC AND FOSTER STREETS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The Key to the Situation

WHY the Royal Worcester Arch-Supporting Shoe gives relief and comfort to tired and aching feet, and cures flat feet, broken arches and so-called rheumatism of the feet

The keyed picture gives a scientific description of the bones of the foot and ankle inside a CASE SHOE.

1. Tibia. 2. Astragalus. 3. Os calcis. 4. Scaphoid and key-bone of arch. 5. Internal cuneiform. 6. Metatarsal of big toe. 7 and 8. First and second phalanges of great toe. 9. Articular cavity between tibia and astragalus. 10. Synovial capsule between astragalus and os calcis. 11. Calcaneo-astragaloid ligament and entrance of sciatic nerve. 12. Synovial capsule between astragalus and scaphoid. 13. Calcaneo scaphoid ligament. 14. Calcaneo-cuboid ligament. 15. Synovial capsule between scaphoid and internal cuneiform. 16. Synovial capsule between internal and first metatarsal. 17. Metatarso-phalangeal articulation of great toe. 18. Phalangeal articulation of great toe.

A scientific description from surgical authority, on another page of this issue, shows conclusively how

The Case Arch-Support Shoe

has solved the problem, bringing health and comfort to your feet.

Yours for Comfort,
CHAS. CASE

In Stock—Prices from $5 to $7

Made to Order $7 to $12

Send draft of feet and description of ailment

No other arch supporter is needed

Chas. Case Shoe Company

Makers of

Fine Shoes for Men and Women

40-44 Thomas Street, Worcester, Massachusetts, U.S.A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

J. W. BISHOP COMPANY CONTRACTORS

Progress Picture of American Antiquarian Society Building, Park Avenue, Salisbury and Regent Streets, Worcester

WINSLOW, BIGELOW & WADSWORTH
OF BOSTON, ARCHITECTS

J. W. BISHOP CO.
BUILDERS

WORCESTER BOSTON NEW YORK PROVIDENCE NEW BEDFORD

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE THREE LEADING HOTELS OF WORCESTER MEMBERS OF THE NEW ENGLAND : : HOTEL MEN'S ASSOCIATION : :

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J POMEROY, Manager

THE

Bay State House

In the Banking District, and one block from Mechanics Hall and Worcester's leading theatre

European Plan Club Breakfasts

Long Distance Phones in Every Room

283 MAIN STREET

G. A. KEELER, Formerly of Hotel Essex, Boston

Opposite City Hall Park

New Park Hotel

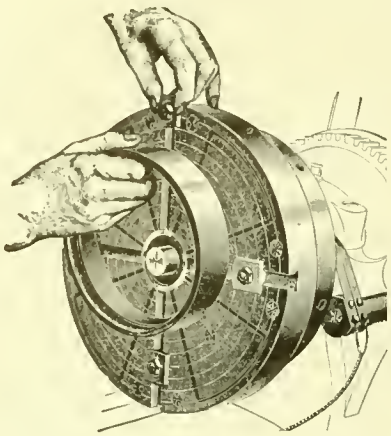
Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather — Mill Strapping — Rubber Belting
Canvas Belting — Belt Lacing — Belt Hooks
Wood Split Pulleys

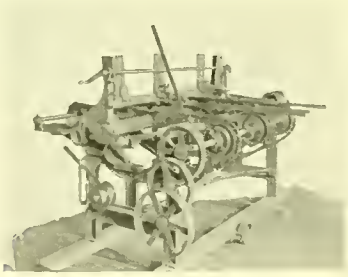
Office and Factory, 1-3 Eaton Place.

Made in Worcester.

ADAMS & POWERS

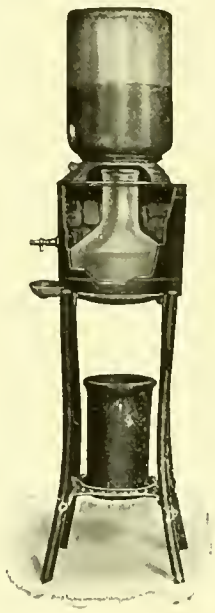
Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.



COMMERCIAL PHOTOGRAPHY.

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.



Absolutely Pure

Sparkling Polar Water
and
White Seal Ginger Ale
BOTTLED AT THE SPRING

Full line of
Carbonated Beverages

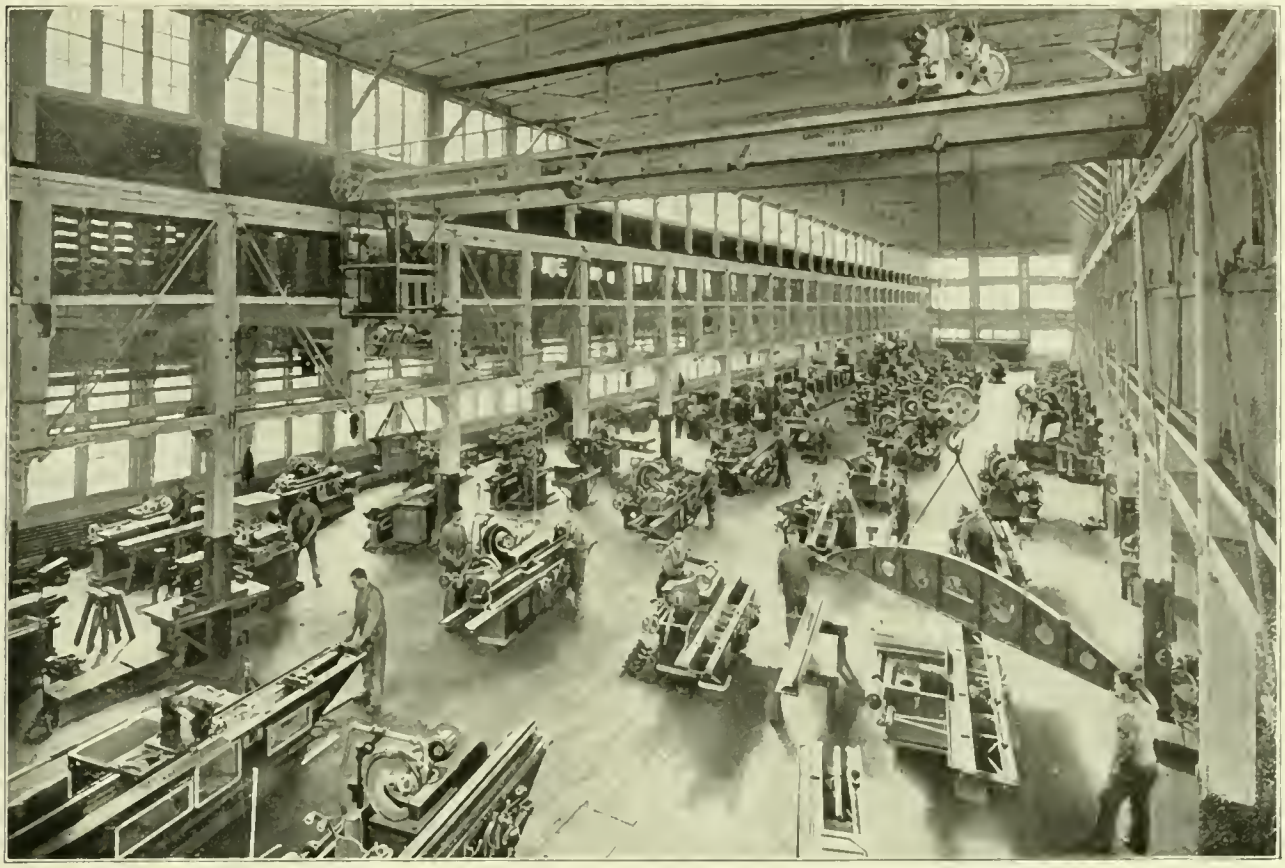
Pure Syrups and
Saratoga Natural Gas

Leicester Polar Spring Co.
28 Myrtle St. Telephone
C. H. CLARENDEN, Mgr.

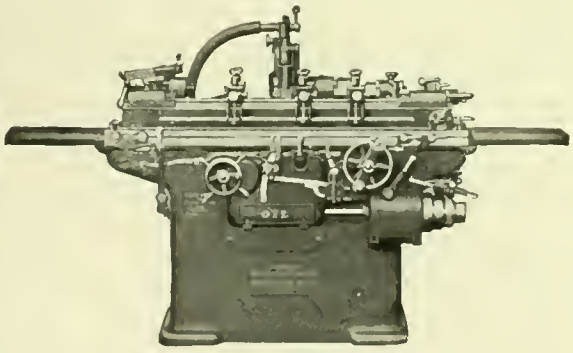
Polar Spring Water on Draught at Board of Trade Rooms

Made in Worcester.

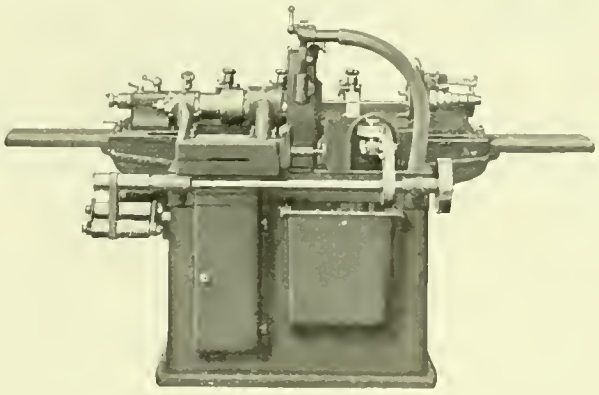
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



A Portion of the 81,000 sq. ft. Devoted Exclusively to the Production of Grinding Machines, Norton Grinding Co.



6″ x 32″ Front View.



6″ x 32″ Rear View

A Commercial Grinding Machine

is one with which you can produce both **Fine Finish** and Rough **Finish**; both Heavy Cuts and Light Cuts,

ACCORDING TO YOUR NEEDS.

We demonstrate at our own expense

SEE OUR
EXHIBIT
At MECHANICS Hall
ON ANOTHER PAGE

AGENTS—

Vonnegut Hardware Co., Indianapolis.
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta.
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.
Motch & Merryweather Mchy. Co., Cleveland, Detroit and Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver.
Henshaw, Bulkley & Co., San Francisco and Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan.

NORTON GRINDING CO.

WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Some of the Medals awarded Norton Grinding Wheels made of Alundum at various expositions

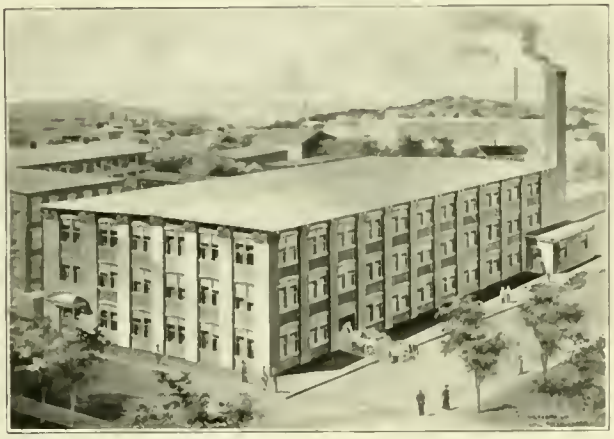
Norton Company *Worcester, Massachusetts*

New York *Chicago* *Niagara Falls*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.



Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather

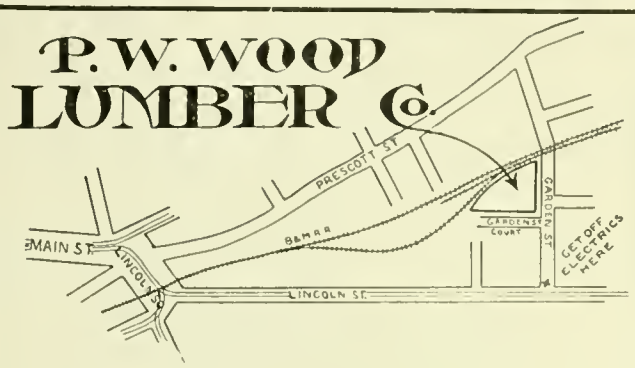
In a NEW FACTORY

With NEW MACHINERY

Better equipped than ever to handle YOUR business

Made in Worcester.

P. W. WOOD LUMBER Co.



SUCCESSORS TO WORCESTER LUMBER CO.

All kinds of

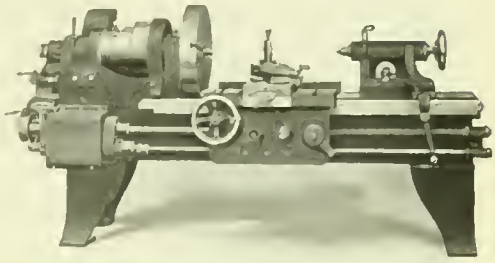
LUMBER

For Building and Shop Work carried in Stock

Telephone 3095

11 GARDEN ST., WORCESTER, MASS.

Start Right



Get good photographs and the rest will follow.

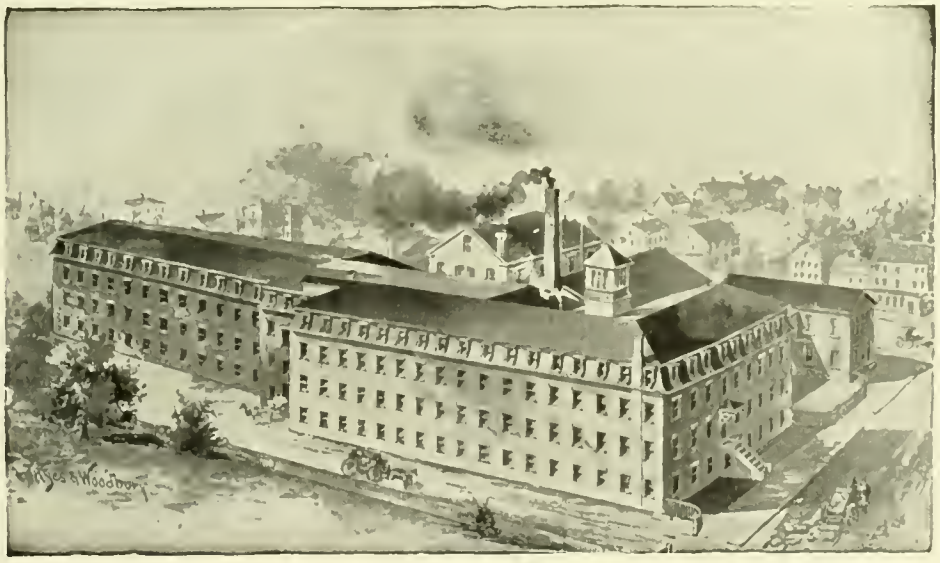
E. B. LUCE

Expert photographer of machinery, tools and all commercial work

At Exposition Feb. 5-11

TELEPHONE

Walker Building



Hammond Reed Company

Manufacturers of

Organ Reeds.

Reed Boards

and other

Organ Supplies

Telegraph and Cable Address. "Reeds," Worcester, Mass., U. S. A.

WORCESTER, MASS.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

Typewriting of all Manuscripts

Telephones : Office 3480; Residence 1299-6 Grace L. Belknap, *Prop.*

DID YOU SEE US AT THE EXPOSITION? We were demonstrating

Multigraphing.

AS A BUSINESS GETTER

Our Multigraph Letters command attention and Bring Results because they are individually written and each is a personal appeal.

They often bring 90 per cent replies

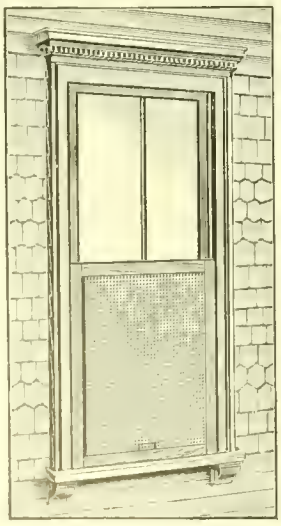
Three-fourths of the prominent advertisers of this country use these letters, securing Real Results. It is the "Still Hunt," for your competitor does not know what You are offering the public.

Send me a copy of your letter, your letter heads, envelopes, stamps and mailing list, and I will:

Multigraph the Letters. Fill in the personal salutation Sign with Electrotype signature, Fold, put in envelopes, stamp, seal. Address the envelopes Mail.

If you are thinking of starting an advertising campaign come and talk it over with us.

WORCESTER MAILING CO.
STATE MUTUAL BUILDING



THE BRANNON SLIDING SCREEN

1874 HENRY BRANNON 1910 HENRY G BRANNON

HENRY BRANNON & SON

MANUFACTURERS OF

Builders' Finish, Store and Office Fixtures

WINDOW AND DOOR

SCREENS

Dowels
Mouldings
Wire Cloth
Doors
Windows
Window Frames
Stairs
Book-Cases
Band Sawing
Jig Sawing
Sanding
Lumber
Mill Work

21-29 CYPRESS STREET, WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings,
Ball Bearings

Steam-Pipe Collars

Ferrules and
Sheet Metal Specialties

Case Hardening

Nickel, Copper and
Brass Plating

also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Walter J. Stone

Stone & Berg Lumber Co.

Successors to JOHN GATES' SONS

EVERYTHING IN

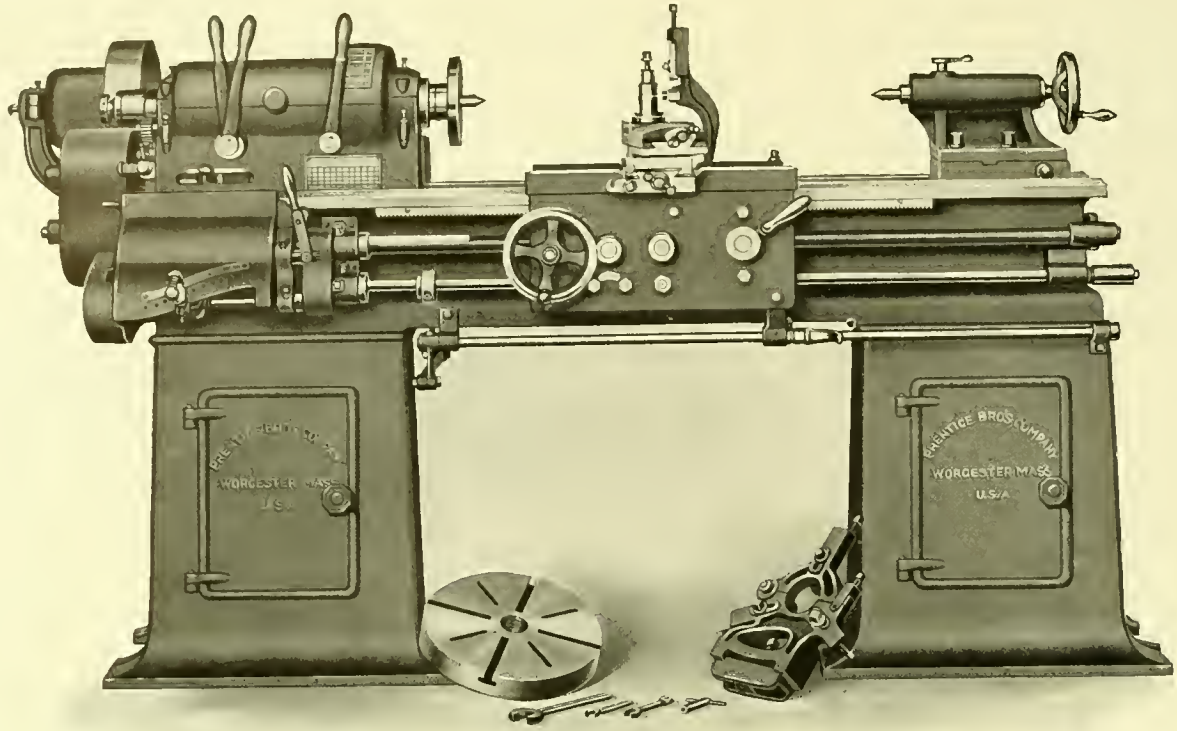
LUMBER

Telephone 3704

181 Union Street Worcester, Mass.

August M. Berg

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

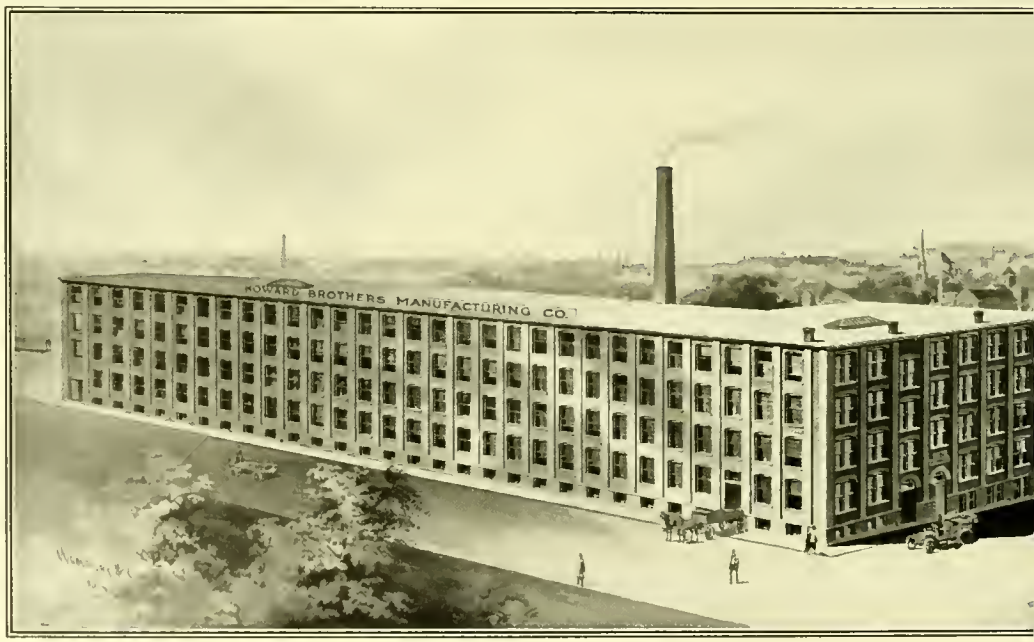
ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets

Worcester, Massachusetts

Made in Worcester.

Progress Pictures
Erwin Cotton Mills

Durham, N. C.

F. P. SHELDON & SONS
Engineers

BLEACHERY, 253′ x 128′

WEAVE SHED, 300′ x 300′

FISKE-CARTER CONSTRUCTION CO.

Builders

Worcester, Mass.

OFFICES
11 Foster Street
Spartanburg, S. C. Greenville, S. C.

WINSLOW'S Skates

Winslow's Skates Stay Sharp

THE BEST ICE AND ROLLER SKATES

The World's Standard Skate. Backed by over 50 years' experience in skate making, by the largest skate makers in the world. Used by champion skaters and high class rinks everywhere. Please write for our new illustrated catalogues. They are free. Kindly state whether you are interested in ice or roller skates.

All dealers
All prices

THE SAMUEL WINSLOW SKATE MFG CO., WORCESTER, MASS., U. S. A. 84-86 CHAMBERS ST., NEW YORK.
8 Long Lane, E. C., London. No. 64 Avenue de la Grande Armee, Paris.
Potsdamer Strasse No. 4, Berlin

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xx
American Car Sprinkler Co., car sprinklers, v
American Narrow Fabric Co., iii
American Publicity Company, xii
Aurora, The, xviii
Bay State House, xix
Bishop Co., J. W., xviii
Blake, Jr., & Co., George F., iron and steel, and supplies, xvi
Blanchard & Co., F. S., printers, Back cover
Brannon & Son, Henry, xxiv
Brierly-Lombard Company, xa
Brownell, George L., twisting and spinning machinery xxviii
Carlton Engraving Co., xiv
Case Shoe Co., Chas., xvii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, xv
Crompton & Knowles Loom Works, looms, Inside back cover
Cummings Shoe Co., Worth cushion shoes, xiv
Davis & Riggs, commercial photographers xx
DeLong, W. H., dental disks, xx
Duncan & Goodell Company, xi
Fiske-Carter Co., general contractors, xxvii
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxiii
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Heywood Boot & Shoe Co., fine shoes, xii
Hill Dryer Co , clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xxvi
Howard-Wesson Co., Inc., x
Howe, Ralph H , xiv
Hudson Belting Co., leather belting, xx
Jackson St. Foundry, iron castings, xxv
Kidder, R. E., drawing tables, v
Leicester Polar Spring Co., xx
Luce, E. B., commercial photographer, xxiii
Marvin Press, The, x
Morgan Construction Co., rolling mill equipment, vi
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxv
Multiple Woven Hose & Rubber Co., fire hose and belting xxviii
New England Anchor Fence Co., xiii
New England Audit Co., xi
New England Motor Supply Co., xiv
New Park Hotel, xix
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xxii
Norton Grinding Co., grinding machines, xxi
People's Savings Bank, x
Pond Machine & Foundry Co., vii
Pratt & Inman, iron and steel, xvi
Prentice Bros. Company, drilling machines, engine lathes xxvi
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robinson Co., The R. W., xvi
Royal Worcester Corset Co., xv
Sherman Envelope Co., envelopes and specialties, v
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxv
Standard Mfg. Co., xiv
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xv
Stone & Berg Lumber Co., xxv
Stone & Foster Lumber Company, xxiv
Snyder & Son, J. E., upright drills, i
United States Envelope Co., xii
Union Water Meter Co., water meters, xvi
Walker & Co., O S., chucks, xx
Warren Hotel, The, xix
Warren, J. F. & W. H., leather belting and mill supplies xxiii
Wheelock Fence Company, xiii
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, i
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxviii
Williams & Bridges, wooden and paper boxes, xxv
Winslow Skate Co., ice and roller skates, xxvii
Wire Goods Co., wire hardware, x
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., iii
Wood Lumber Co., P. W., xxiii
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Machine Screw Co., set, cap and machine screws, xxvii
Worcester Mailing Company, xxiv
Worcester National Bank, ii
Wright Wire Co., wire and wire cloth, wire rope, etc. ii
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

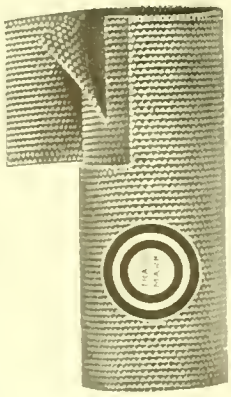
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

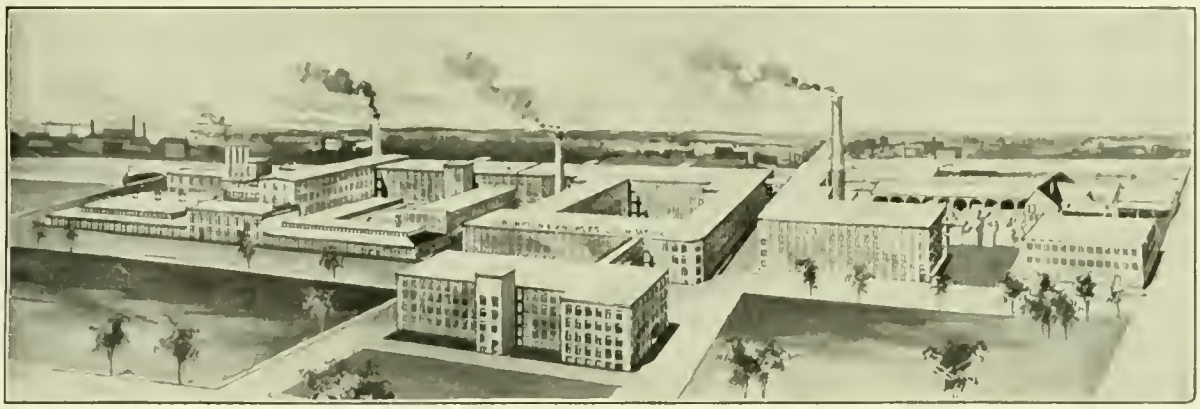
SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the adverliser and the publication.

A LOOM FOR EVERY FABRIC



WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

Representative Printing

IF you want the public to believe that you produce or sell an article superior to that of your competitor, then your *Printing* should convey that impression by its superiority.

If you want to impress the public with the distinctiveness of your concern or its product, then distinctiveness must be the dominant feature of the literature which represents your concern.

To combine these qualities—to make your *Printing* representative of you and your product—is the constant study of this establishment. It's the eternal fitness of things that counts.

Our *Printing* "fits"—and it counts—and is sold on the assumption that there's economy in quality.

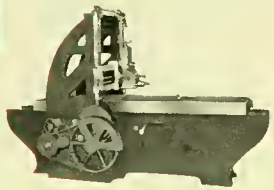
F. S. Blanchard & Co., 6 Walnut Street, Worcester, Mass.

ROLLING MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN NSTRUCTION COMPANY

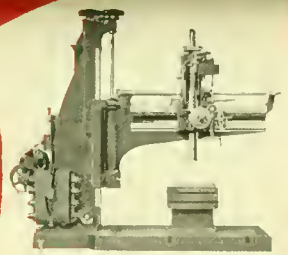
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES
PRENTICE BROS. CO.

SLATER BLDG

WOODWARD & POWELL PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE ATON & KNIGHT MFG. CO.

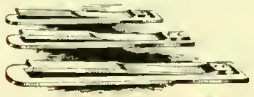
OAK LATHER ANNERS AND BELT MAKERS

CESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

ORGAN REEDS
HAMMOND REED COMPANY



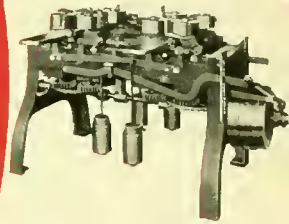
FOR ALL MOTOR CARS

OILZUM

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

"MADE IN WORCESTER, U. S. A."

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

POSED NEW UNION STATION

CITY HALL

GOVERNMENT BLDG

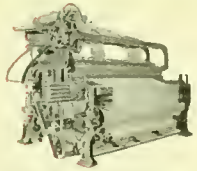
LATHES
F. E. REED COMPANY

-MOORE" ST HOSE

IPLE WOVEN & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

HEYWOOD TRADE MARK SHOE 1884

Heywood Boot & Shoe Co.

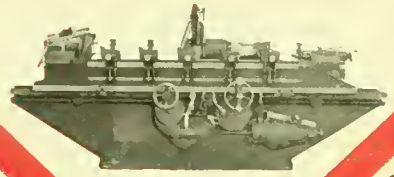
ARMORY

INSLOW'S Skates

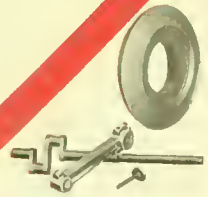
BEST ICE AND ROLLER SKATES

ART
NOVELTIES
VALENTINES

NORTON GRINDING MACHINES

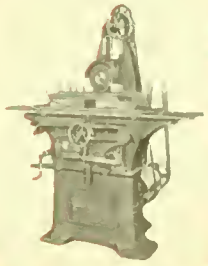


NORTON GRINDING



The WYMAN & GORDON CO.
DROP FORGINGS

O. S. WALKER & CO.



ORGAN Reeds
Hammond Reed Co.

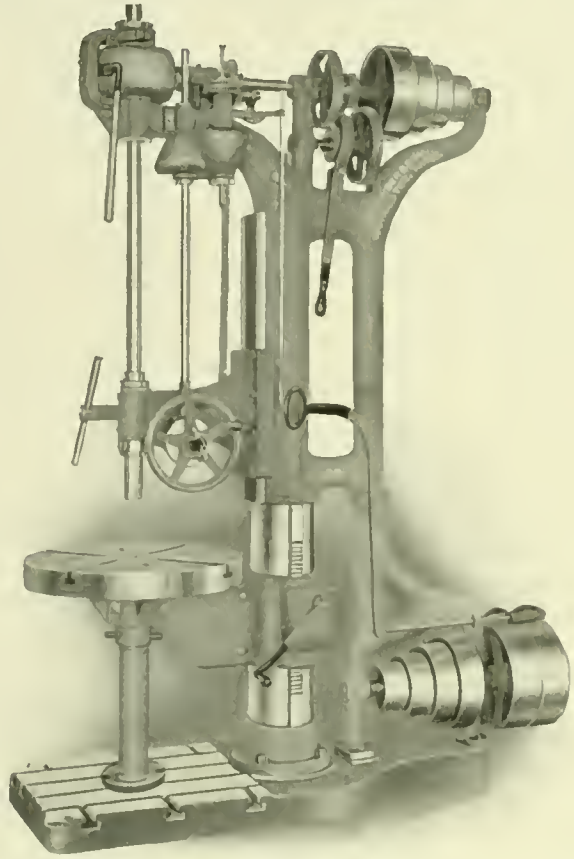
Everything in Wire

TRADE MARK

The Wire Goods Co.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

WORCESTER, MASS., U. S. A.

SECOND-BELT DRIVE PLANERS

are peculiarly adapted to all classes of work requiring speed and accuracy, as they do away with all shock and jar, and results are large and finish perfect.

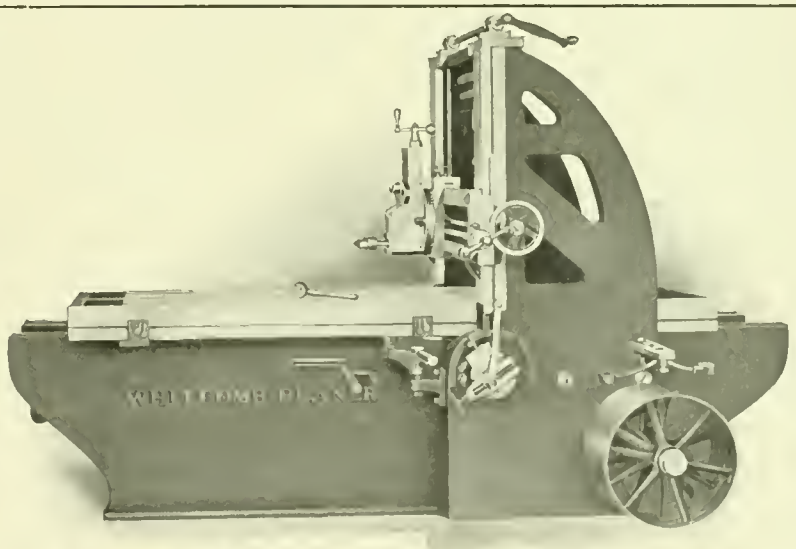
WHITCOMB

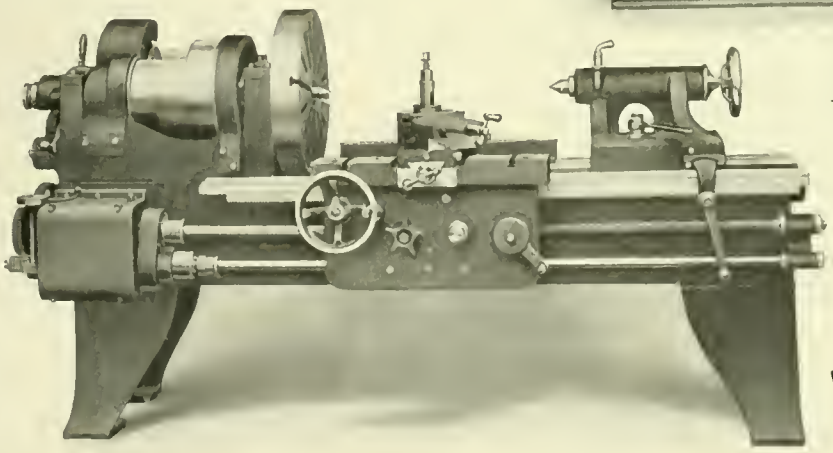
Planers

17″ 22″ 24″ 26″ 30″

Lathes

13″ 16″ 18″ 20″ 24″





THREE-STEP CONES, DOUBLE BACK GEARS

make these lathes rank among the greatest producers in their line.

Satisfaction Guaranteed

BLAISDELL

Whitcomb-Blaisdell Machine Tool Co.

Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

QUESTION FROM STRANGER: "What is the reputation of the Eddy Keen Edge Razor Strop?"

ANSWER FROM THE MAN WHO KNOWS: "It has proven itself the best, producing a smooth, keen, sharp edge on a razor, and this with less expenditure of time and labor than with any other strop; being ready for use when you buy it; never setting hard and glossy as others do."

These qualities are the result of our own process of treating leather which others have tried in vain to duplicate. For sale at all Worcester hardware, drug, sporting goods and barber supply stores. Buy one the next time you go down town and wear a smile while you are shaving instead of a frown. You will look better and feel better.

FOR SALE BY DEALERS EVERYWHERE.

THE EDDY COMPANY

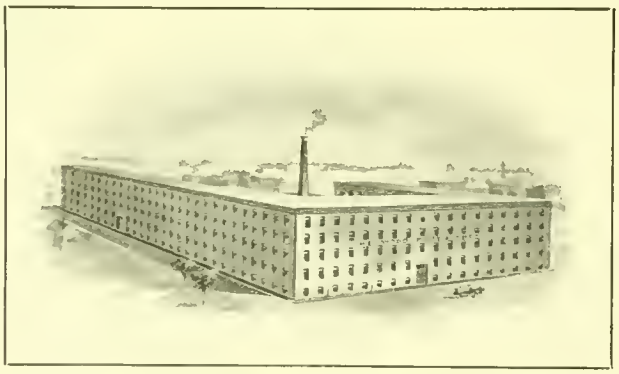
MAKERS OF

THE EDDY RAZOR STROP

"GIVES A KEEN EDGE"

WORCESTER, MASS., U. S. A.

Made in Worcester.



High Grade Shoes for Men

HEYWOOD TRADE MARK SHOE 1864

Factory and Main Office
70 Winter St., Worcester, Mass.

New York Office
127 Duane St., New York City

Retail Store
415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer
Buenes Aires, Argentine Republic

Patterson & Ruhfus
Melhourne and Sydney, Australia

HEYWOOD TRADE MARK SHOE 1864

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"DE VARS" Quality

"DE VARS" American Maid Hose-Supporters

"DE VARS" E. Z. B. Suspenders

"DE VARS" Pinon Dress Shields

Made in all sizes and styles

Remember that "DE VARS" is on the BEST Hose-supporters, Suspenders and Shields

American Narrow Fabric Co.

MANUFACTURERS

Worcester, Mass.

SEATTLE CHICAGO NEW YORK BALTIMORE

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Bank Block

Interior Banking Rooms

(The Oldest Bank in Worcester)

Worcester National Bank

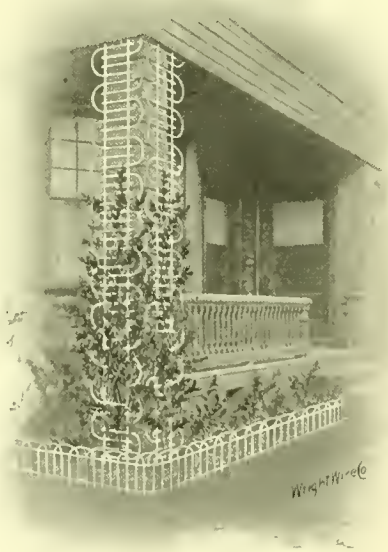
11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

"Excelsior" Ornamental Wire Fences

Flower Bed Guard



Trellis

Tree Guards

Guaranteed Rust-Proof
Iron Fences and Gates

WRIGHT WIRE COMPANY

69 Hammond Street
Worcester, Mass.

WAREHOUSES:
Boston,
New York, Philadelphia
Chicago, San Francisco

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

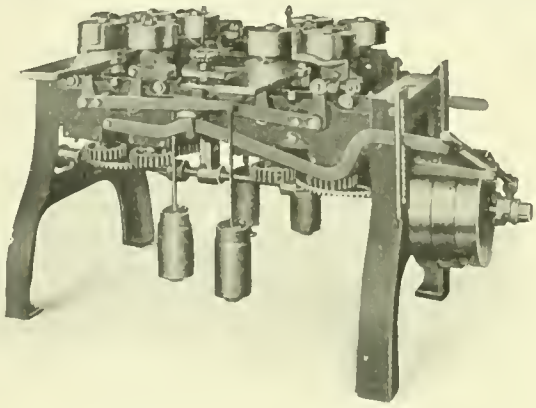
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

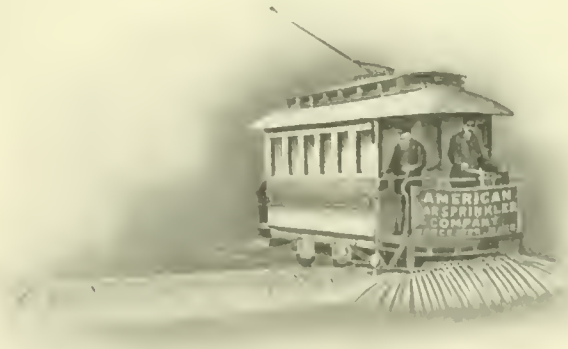
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Found at Last!

A boring machine for wood built on the right principle. Workmanship and material the best. New features.

Send for circular.

R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

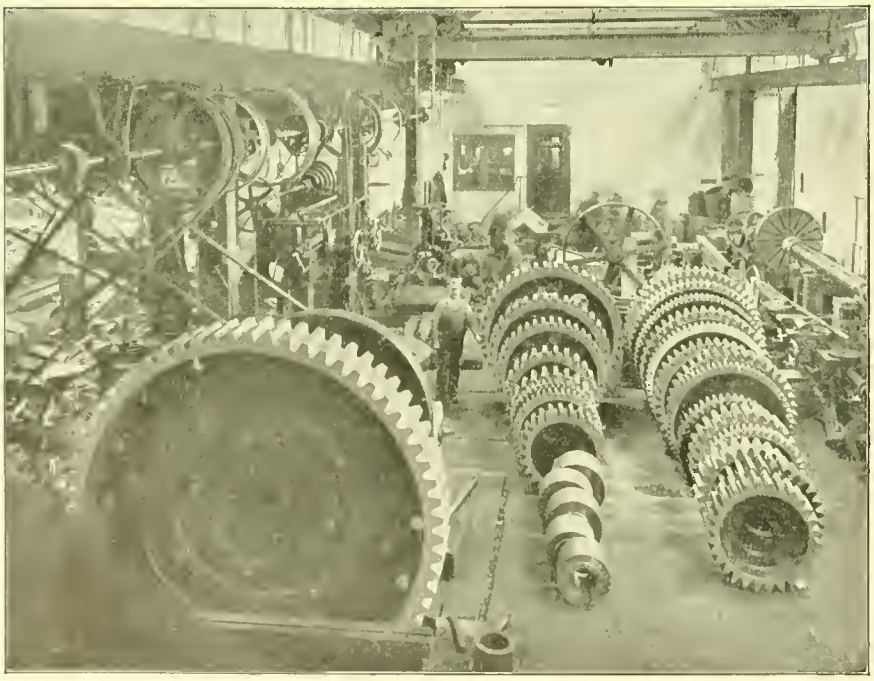
Craig Street Facade, Bank of Montreal, Montreal, Quebec
McKim, Mead & White, Architects.

The Norcross Brothers Company, Builders.

The Norcross Brothers Company

General Contractors and Builders

New York
Boston
Providence
Washington
Worcester



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

If your dealer cannot furnish, write to

Standard Manufacturing Company

186 Union Street, Worcester, Mass., U.S.A.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Nicely Finished Leather

is good to look at, but will it stand the "service" test?

That our leather and belting may meet both requirements is the reason why *we must know absolutely* that the leather itself is of prime quality and therefore adapted to the exacting service required of it after it is made up into leather belting.

This, then, is one reason why we buy the "green," salted hides and through the different stages of

"Soaking," "Cleaning," etc.

tan them in our own tannery expressly for belting purposes.

If you want

The Best

value obtainable for every dollar you expend for

Leather Belting

just make your wants known to

The Graton & Knight Mfg. Co.

Oak Leather Tanners and Belt Makers

Worcester, Mass., U.S.A.

1851 G&K TRADE MARK

Branches: Atlanta, Boston, Chicago, Milwaukee, Minneapolis, New York, Philadelphia, Portland, Ore., San Francisco, Seattle, St. Louis

Made in Worcester.

WHEATON'S CAMERAS

Photographic Apparatus
Materials and Chemicals
for

WHEATON'S CAMERAS

:: Manufacturers ::

CAMERAS AND SUPPLIES
WHEATON & BOWERS
KODAKS
366 MAIN ST.
WORCESTER

A complete line of Cameras, Films, Plates, Papers and Mounts for Amateur Photographers

Developing and Printing

Wheaton & Bowers

WHEATON'S CAMERAS

Photographic Department
366 Main Street,
Worcester

WHEATON'S CAMERAS

The Commonwealth Press
OLIVER B. WOOD
WORCESTER MASS.

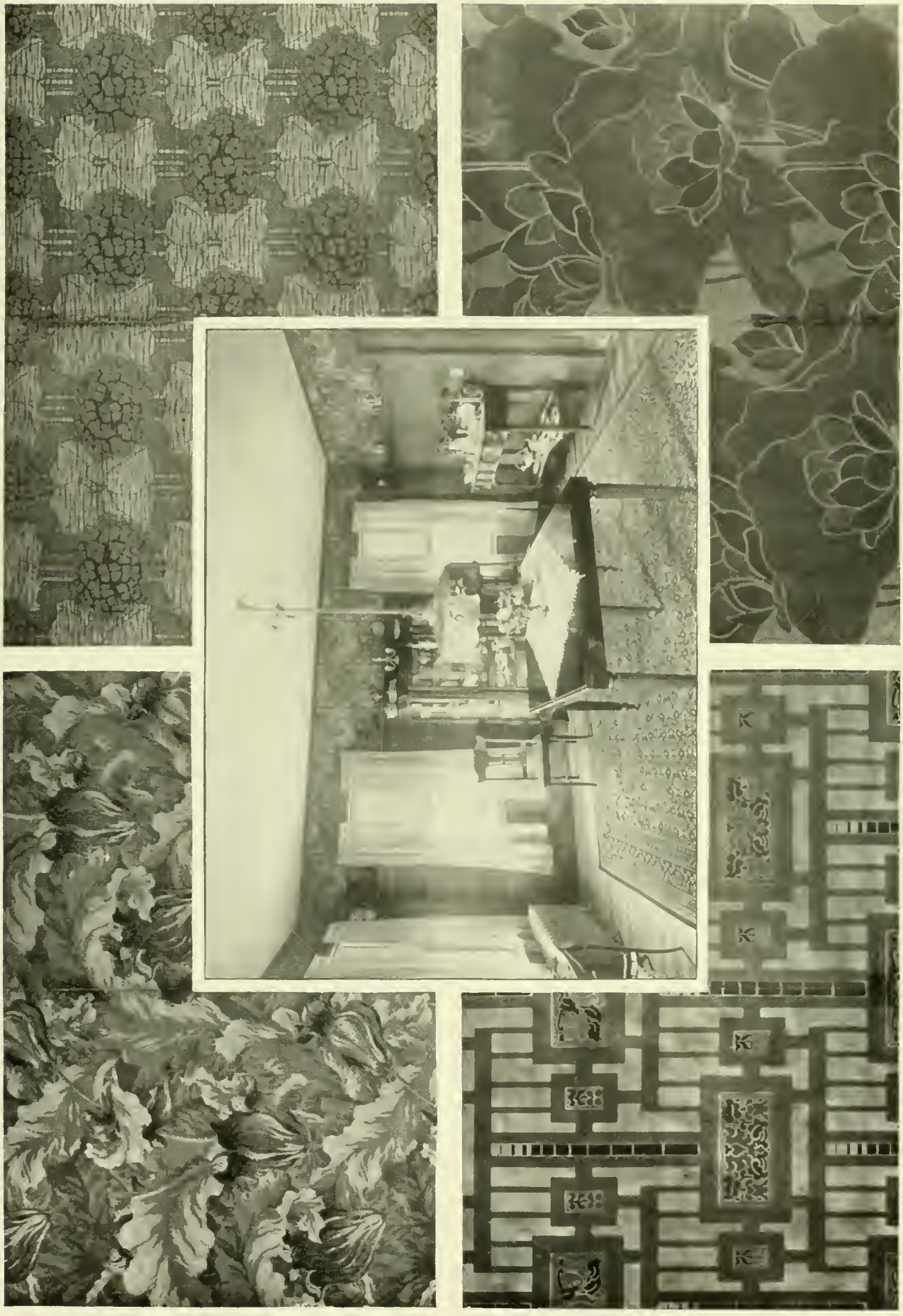
4655
4656

New
Telephone Numbers
Made Necessary
by Increase in Business

Use Either in Place
of
Old Number, 649

The
Commonwealth Press
PRINTERS
50 Foster Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



"VOGUE PAPERS" MADE BY ALLEN-HIGGINS WALL PAPER COMPANY, WORCESTER, MASS.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier*

Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

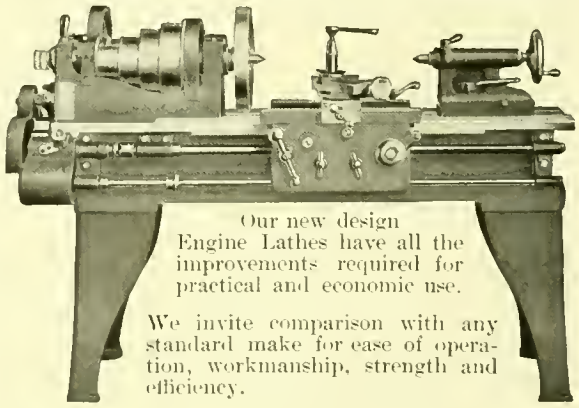
New England Audit Company

Springfield — Court Square Building

Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

ROBBINS ENGINE LATHES



Our new design Engine Lathes have all the improvements required for practical and economic use.

We invite comparison with any standard make for ease of operation, workmanship, strength and efficiency.

12, 14 and 16 inch sizes

Send for Circulars

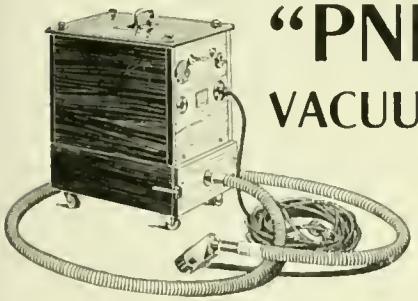
THE ROBBINS MACHINE CO.

150 E. Lagrange St., Worcester, Mass., U. S. A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MADE

accounts for the amazing sales of the



ELECTRIC PNEUVAC—HOUSEHOLD
Type "C"

"PNEUVAC"
VACUUM CLEANER

Also because it is Simple, Portable, Powerful, Efficient, Scientific and Reasonable

Prices are

Style C, as shown above,	$125.00
Style A, hand machine,	30.00
Style B, electric, for hotels, etc.,	150.00

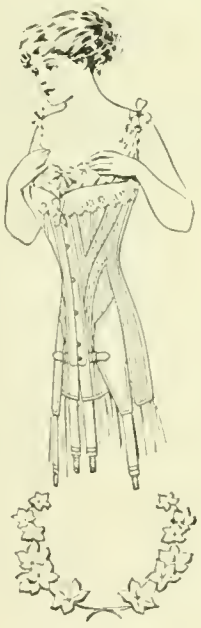
Manufactured by

M. S. WRIGHT COMPANY
Piano Hardware, etc.
WORCESTER, MASS.

Also by

PNEUVAC COMPANY
BLAKE BLDG., BOSTON, MASS.

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester



REPRESENTING A FEW STYLES OF THE FAMOUS CORSETS

Manufactured by

CORSET H COMPANY
WORCESTER, MASS.
U. S. A.

Represented by leading Worcester Corset Departments
Known as the "Jewel" Brand at John C. MacInnes Co's.
Known as the "Corset H" Brand at C. T. Sherer Co.'s.
Known as the "Ivy" Brand at Barnard, Sumner & Putnam Co's

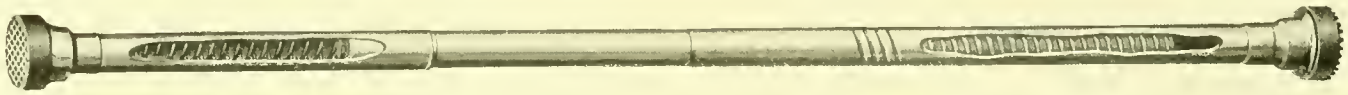
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

DEMONSTRATING THE FOWLER CURTAIN RODS AT THE MECHANICS EXPOSITION

Users of *Fowler Extension Curtain Rods and Pole Sockets* say they are perfect

We say they are the best rods on the market

Put them in your stock and see how easily they sell



Sold by all leading dry goods and furniture stores

Screw adjustment

FOWLER & CO., 65 BEACON ST., WORCESTER, MASS.

Send for new catalogue—D

AMERICAN PUBLICITY COMPANY

ADVERTISING SIGNS

CORNER AUSTIN AND HIGH STREETS
WORCESTER

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ROYAL WORCESTER
CORSETS

Adjusto Style 608
Price $3

EVERY ROYAL WORCESTER Corset is an original conception designed upon correct lines, fashioned from the best materials with painstaking care by skilled workpeople, and emanates from one of the largest and most perfectly equipped corset plants in the world.

Unmistakably the ROYAL WORCESTER is the greatest corset value at a medium price. Anyone can well afford to buy and wear the ROYAL WORCESTER—it is the one sure way to solve all corset troubles.

Invariably, women who once wear

ROYAL WORCESTER CORSETS

become enthusiastic devotees to their favorite style and could not be induced to wear another kind.

Don't invest in a new gown until you procure a ROYAL WORCESTER over which to fit it. The diversity of styles and varying heights and lengths will enable you to do this with ease, and you will enjoy the utmost in style, fit, comfort and service.

Our assortment is complete, including all the new 1910 models. Coutil or batiste.

PRICES $1 TO $3

Style 633
Price $2.50

Model 906
Price $5

Style 504
Price $1.50

Also sole Worcester agents for BON TON Corsets, $3 to $15, and ADJUSTO Corsets, $3 and $5

BOSTON STORE
Denholm & McKay Co.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

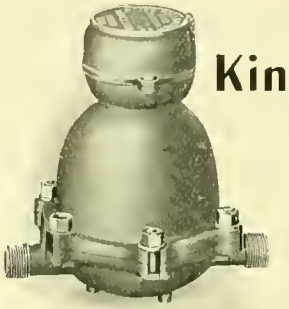
Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall



The King Disc Meter

COMBINING

Best Material and Workmanship

CONTRACTORS, PATRONIZE HOME INDUSTRY

Union Water Meter Company

Worcester, Mass.

Made in Worcester.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

ANGLES AND CHANNELS

BLACKSMITH & CARRIAGE HARDWARE,

JUNCTION OF BRIDGE, MECHANIC AND FOSTER STREETS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"Charlie Case says:"

I Am the Best Friend Your Feet Ever Had

IF you haven't treated your feet right and they are now in an abnormal condition, let me show you how to gain real foot comfort

You Hear a Lot these Days about fallen arches and flat feet. The trouble usually results from wearing ill-fitting shoes, which do not support the arch of the foot. The muscles become strained and swollen and the ligaments of the arch relaxed. Result: that "tired feeling," aching leg muscles, backache, headache and so-called "foot rheumatism." Loose metal arch supports inserted in ordinary shoes get out of place, cause pain and numbness, while affording little relief.

CASE ARCH SUPPORT SHOES RELIEVE FALLEN FOOT ARCHES

CASE Arch Supports add nothing to the bulk or weight of the shoes, and do not detract from their trim, stylish lines. The Arch Supports are not metal plates, but highly elastic, and built into the shoe, and made to spring forward with each movement of the feet. They do not numb the feet, but start a natural circulation of the blood, which is of great benefit in restoring the feet to their normal condition. Try one pair and be convinced of their ability to correct foot troubles.

CASE SHOE CHAS TRADE MARK

CASE ARCH SUPPORT SHOES FOR MEN AND WOMEN

CASE Royal Worcester Arch Support Shoes for Women are made of select materials by expert workmen. They give long and satisfactory wear.

PRICES

Single Sole Index Kid,	$5
Single Sole Index Calf,	6

Shoes made to order in all leathers, $2 per pair extra

CASE Arch Support Shoes for Men. High class in every detail.

PRICES

Single Sole Index Kid,	$5
Double Sole Index Kid,	6
Single Sole Index Calf,	6
Double Sole Index Calf,	–

Shoes made to order in all leathers, $2 per pair extr

FREE delivery of Case Shoes anywhere in the United States on receipt of price in check or money order, if your dealer hasn't them. State size and width usually worn. Satisfaction guaranteed.

Ask for

descriptive booklet on foot troubles

by

Charlie Case

HOW TO MEASURE YOUR FOOT

Draw tape measure fairly snug

Draw a straight line upon a sheet of paper. Place your foot upon the line so that the centre of the heel and instep rests upon the line; then holding the pencil upright draw the outline of the foot. Fill out the measurements 1, 2, 3, 4, as indicated upon the diagram.

CHAS. CASE SHOE COMPANY

WORCESTER, MASS.

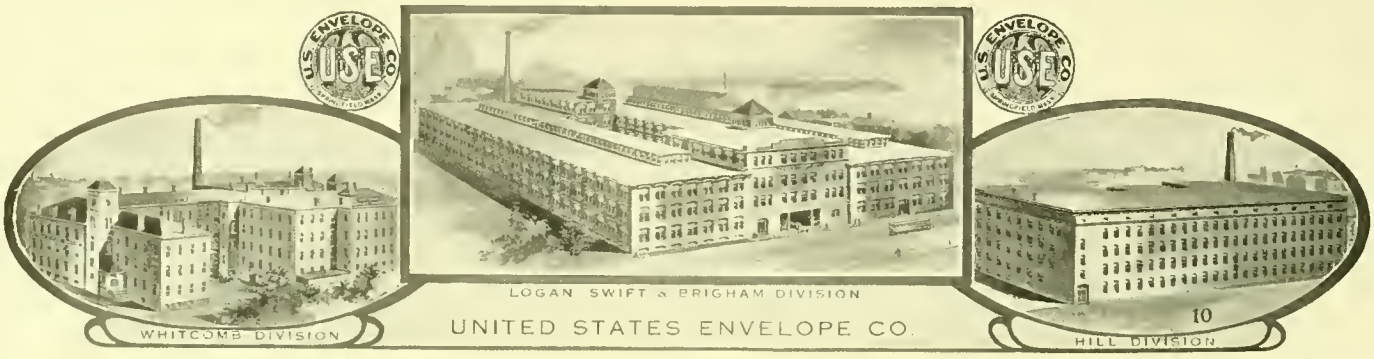
Makers of a full line of men's and women's high-grade shoes

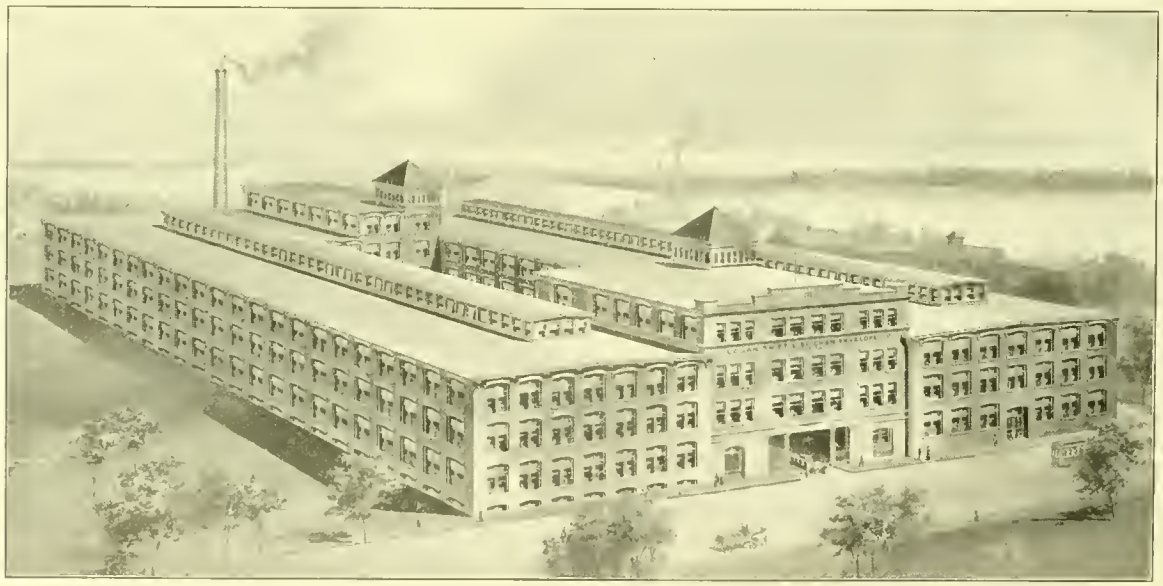
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER

THE PIONEER CITY OF AMERICA FOR MACHINE-MADE ENVELOPES STILL SETTING THE STANDARD FOR THE COUNTRY.

MORE ENVELOPES ARE MANUFACTURED IN WORCESTER THAN IN ANY OTHER CITY IN THE WORLD.





LOGAN, SWIFT & BRIGHAM DIVISION
Approximately 170,580 Square Feet of Floor Space

WORCESTER PLANTS

OF

The United States Envelope Co.

THE LARGEST ENVELOPE MANUFACTURER IN THE WORLD, MANUFACTURING ALL SIZES AND GRADES OF ENVELOPES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE THREE LEADING HOTELS OF WORCESTER MEMBERS OF THE NEW ENGLAND HOTEL MEN'S ASSOCIATION

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

THE

Bay State House

In the Banking District, and one block from Mechanics Hall and Worcester's leading theatre

European Plan Club Breakfasts

Long Distance Phones in Every Room

283 MAIN STREET

G. A. KEELER, Formerly of Hotel Essex, Boston

Opposite City Hall Park

New Park Hotel

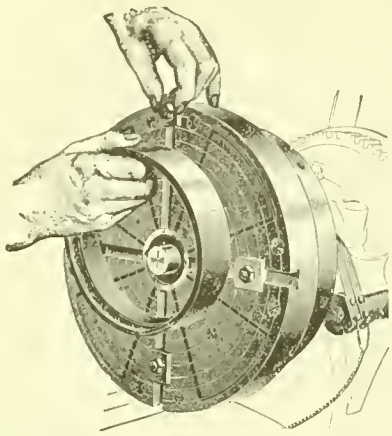
Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN E. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Dis s

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather · Mill Strapping · Rubber Belting
Canvas Belting · Belt Lacing · Belt Hooks
Wood Split Pulleys

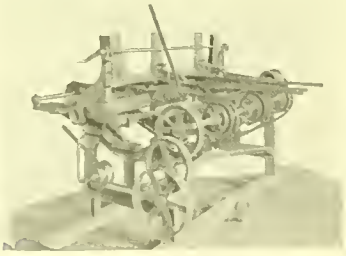
Office and Factory, 1-3 Eaton Place.

Made in Worcester.

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street. Worcester, Mass.

Made in Worcester.



COMMERCIAL PHOTOGRAPHY.

DAVIS & RIGGS
306 MAIN ST.
WORCESTER, MASS.

Absolutely Pure

Sparkling Polar Water
and
White Seal Ginger Ale
BOTTLED AT THE SPRING

Full line of
Carbonated Beverages

Pure Syrups and
Saratoga Natural Gas

Leicester Polar Spring Co.
28 Myrtle St. Telephone
C. H. CLARENDEN, Mgr.

Polar Spring Water on Draught at Board of Trade Rooms

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

PLATE MADE DIRECT FROM
A SKY PHOTOGRAPH

YOU have read of the Indian magician who throws a rope into the air and sends a boy up the rope until he disappears from view.

We have never studied magic, but we lift into the air a light trellis of wood and wire, send up on it a large camera, and ninety feet above the ground a negative is made, sharp, perfectly focused, and covering the required field.

The only real magic about it is the magic of good work, although it must be acknowledged that there is a touch of the magical in the beauty and interest of the result.

For years we have made bird's-eye-view drawings, and still recommend them in certain cases where we believe they are more desirable, but we expect that the "sky photograph" will set the standard for this line of work because it tells its story effectively and truthfully. As one of our clients happily expressed it, "It is the *certified check* of bird's-eye-view illustration."

Several of our original ideas for other lines of commercial photography are developing so much importance that we have decided to tell the rest of the story in the May number of the Magazine, and thus tell it more completely than will be possible on this page.

Woodbury and Company

Incorporated

ARTISTS, ENGRAVERS, ART PRINTERS

Worcester, Massachusetts

Woodbury and Company
Incorporated

Four Walnut Street
Worcester

Designs

Bird's-Eye-View Drawings

Sky Photographs

Commercial Photography

Plate Making

Plate Printing

Telephone 5245

Norton Alundum Plant
Niagara Falls, N. Y.

Works of
Norton Co. and Norton Grinding Co.
Worcester, Mass.

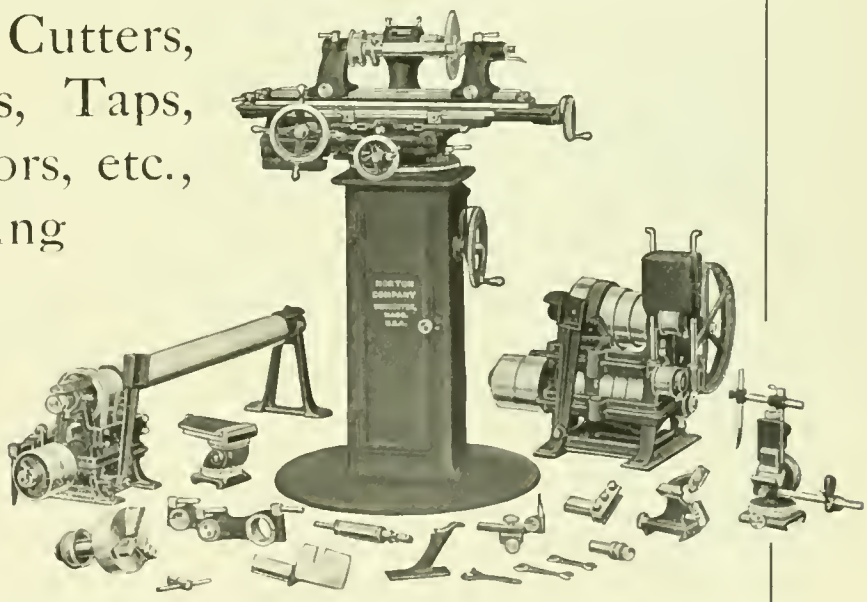
Norton Grinding Wheels are known and used in all parts of the world

Grinding Machinery
Rubbing and Sharpening Stones

Glass Cutting Wheels
Scythe Stones

Razor Hones
India Oil Stones

For Grinding Milling Cutters, Reamers, Counterbores, Taps, End-Mills, Holes, Arbors, etc., and for Surface Grinding



This is just the machine you need. It is made specially for tool work, and does it right. The attachments for the various operations are quickly and easily adjusted. We are constantly improving the

"Norton" Universal Tool and Cutter Grinder

BUILT IN TWO SIZES

Catalogue TC4 gives full details

Norton Grinding Company

General Office and Works
Worcester, Mass., U. S. A.

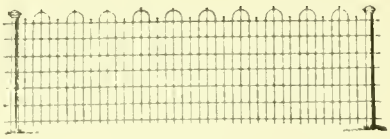
Chicago Store, 27 North Canal Street
New York Office, 50 Church Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

Wheelock Rust Proof Fence, City Hall Plaza

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

Although we specialize on halftones, and "Carlton Halftones" are famous, beautiful and exact reproductions of the photographic originals, yet we give particular care in the preparation of Line Cuts or Zinc Etchings (as above), which are so necessary in aggressive, effective newspaper and miscellaneous advertising, where rough surfaced stock is printed upon and the purpose is to attract quick attention. In this line of work we are prepared to furnish ideas, rough sketches and the finished drawings from which *Line Cuts* can be made that will make your ads "business getters!"

Try Us and See

Carlton Engraving Company

At Worcester's Busiest Corner

418 Main Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

Manufacturers of

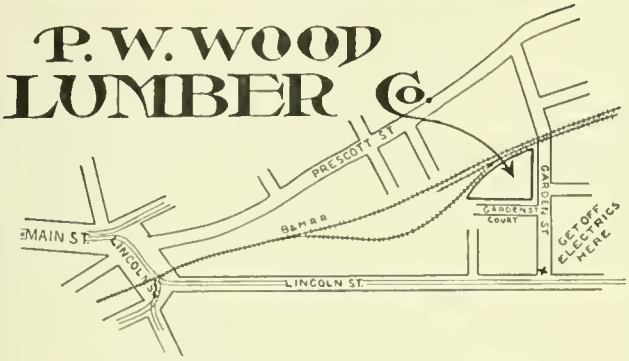
LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.

P. W. WOOD LUMBER Co.



SUCCESSORS TO WORCESTER LUMBER CO.

All kinds of

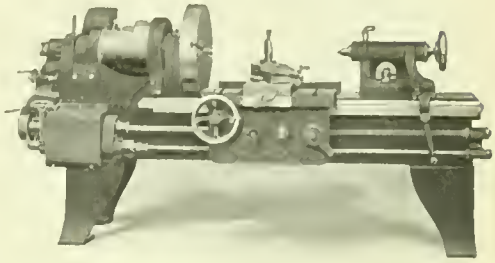
LUMBER

For Building and Shop Work carried in Stock

Telephone 3095

11 GARDEN ST.,
WORCESTER, MASS.

Start Right



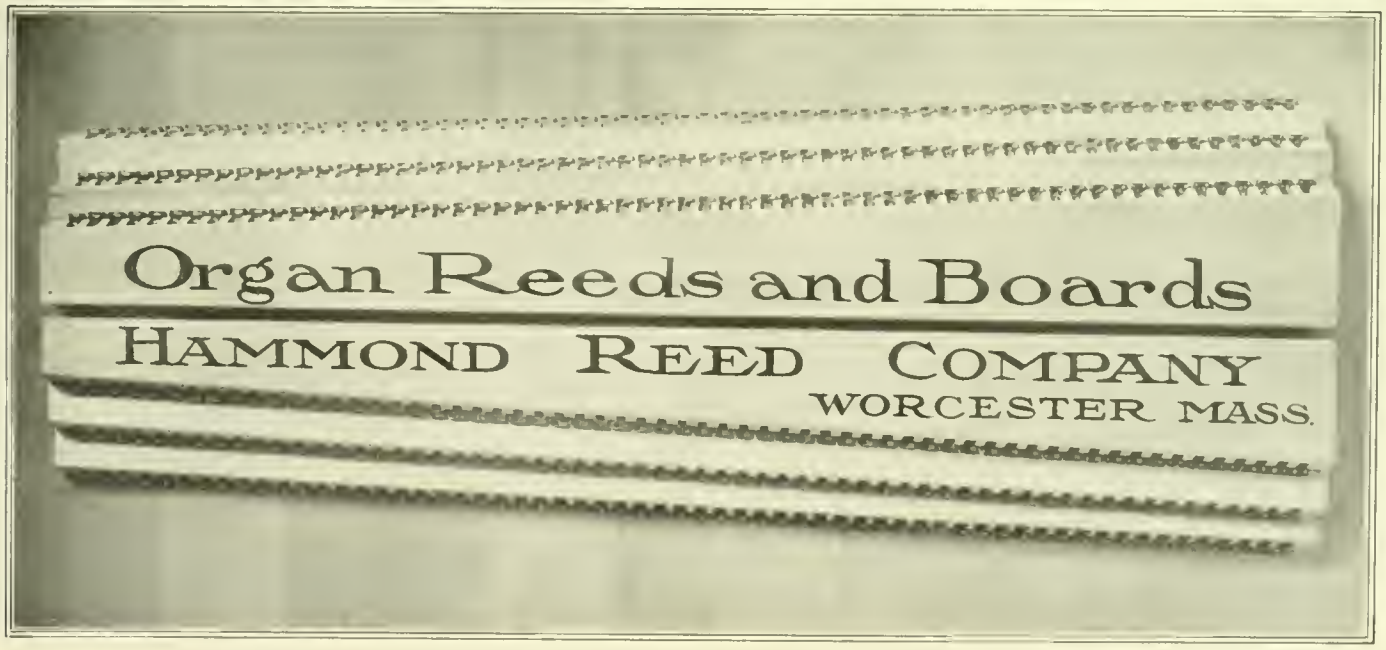
Get good photographs and the rest will follow.

E. B. LUCE

Expert photographer of machinery, tools and all commercial work

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

Typewriting of all Manuscripts

Telephones : Office 3480; Residence 1299-6. Grace L. Belknap, *Prop.*

DID YOU SEE US AT THE EXPOSITION? We were demonstrating

Multigraphing.

AS A BUSINESS GETTER

Our Multigraph Letters command attention and Bring Results because they are individually written and each is a personal appeal.

They often bring 90 per cent replies

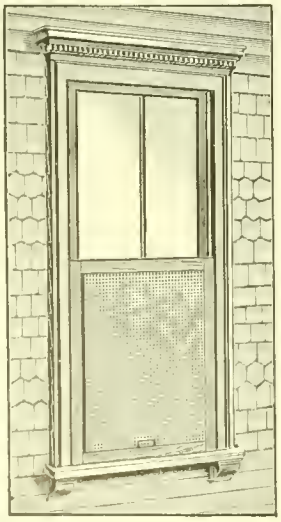
Three-fourths of the prominent advertisers of this country use these letters, securing Real Results. It is the "Still Hunt," for your competitor does not know what You are offering the public.

Send me a copy of your letter, your letter heads, envelopes, stamps and mailing list, and I will:

Multigraph the Letters. Fill in the personal salutation. Sign with Electrotype signature. Fold, put in envelopes, stamp, seal. Address the envelopes. Mail.

If you are thinking of starting an advertising campaign come and talk it over with us.

WORCESTER MAILING CO.
STATE MUTUAL BUILDING



THE BRANNON SLIDING SCREEN
Made in Worcester.

1874 HENRY BRANNON 1910 HENRY G. BRANNON

HENRY BRANNON & SON

MANUFACTURERS OF

Builders' Finish, Store and Office Fixtures

WINDOW AND DOOR SCREENS

Dowels
Mouldings
Wire Cloth
Doors
Windows
Window Frames
Stairs
Book-Cases
Band Sawing
Jig Sawing
Sanding
Lumber
Mill Work

21-29 CYPRESS STREET, WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars

Ferrules and Sheet Metal Specialties

Case Hardening

Nickel, Copper and Brass Plating

also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Walter J. Stone

Stone & Berg Lumber Co.

Successors to JOHN GATES' SONS

EVERYTHING IN

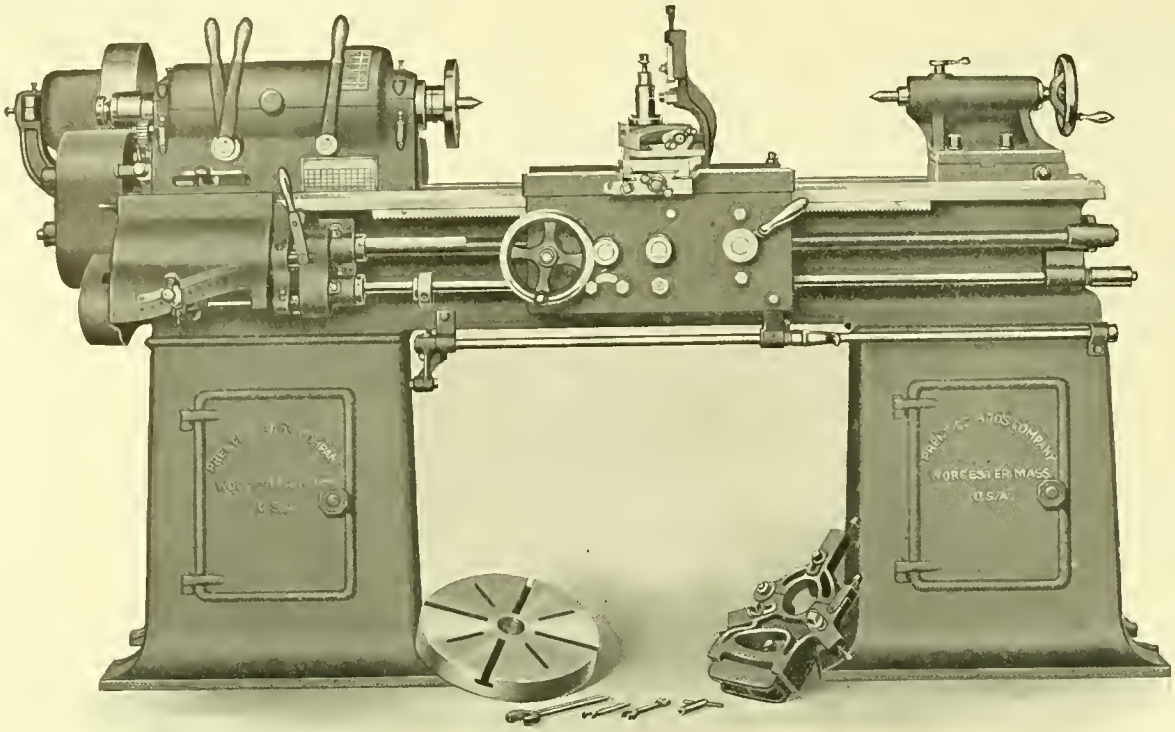
LUMBER

Telephone 3704

181 Union Street Worcester, Mass.

August M. Berg

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

Progress Pictures
Erwin Cotton Mills

Durham, N. C.

F. P. SHELDON & SONS
Engineers

BLEACHERY, 253′ x 128′

LOOM WEAVE SHED, 300′ x 300′

FISKE-CARTER CONSTRUCTION CO.

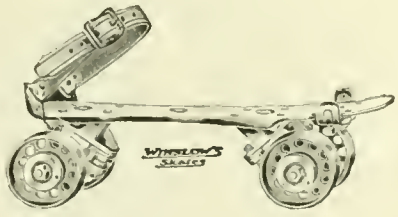
Builders

Worcester, Mass.

OFFICES
11 Foster Street
Spartanburg, S. C. Greenville, S. C.

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES



Winslow's Number 17 Ball-Bearing Rink Skate for Men Fitted with "WEB" Steel Rolls

Please Send for New Catalogues.

THE SAMUEL WINSLOW SKATE MFG. CO., WORCESTER, MASS., U.S.A.

New York, 84 Chambers St. London, 8 Long Lane, E. C.
Paris, 64 Avenue de la Grande-Armee

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xx
Allen-Higgins Wall Paper Co., xi
American Car Sprinkler Co., car sprinklers, v
American Narrow Fabric Co., iii
American Publicity Company, xiv
Bay State House, xix
Bishop Co., J. W., xviii
Blake, Jr., & Co., George F., iron and steel, and supplies, xvi
Blanchard & Co., F. S., printers, Back cover
Brannon & Son, Henry, xxiv
Brownell, George L., twisting and spinning machinery xxviii
Carlton Engraving Co., xxii
Case Shoe Co., Chas., xvii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, viii
Corset II Company, xiii
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers xx
DeLong, W. H., dental disks, xx
Eddy Company, ii
Fiske-Carter Co., general contractors, xxvii
Fowler & Co., curtain rods, xiv
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxiii
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Heywood Boot & Shoe Co., fine shoes, ii
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xxvi
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xx
Jackson St. Foundry, iron castings, xxv
Kidder, R. E., drawing tables, v
Leicester Polar Spring Co., xx
Luce, E. B., commercial photographer, xxiij
Morgan Construction Co., rolling mill equipment, vi
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxv
Multiple Woven Hose & Rubber Co., fire hose and belting xxviii
New England Anchor Fence Co., xxii
New England Audit Co., xi
New Park Hotel, xix
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xxi
Norton Grinding Co., grinding machines, xxi
People's Savings Bank, x
Pond Machine & Foundry Co., xxv
Pratt & Inman, iron and steel, xvi
Prentice Bros. Company, drilling machines, engine lathes xxvi
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robbins Machine Co., lathes, xi
Royal Worcester Corset Co., xv
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxv
Standard Mfg. Co., vii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xv
Stone & Berg Lumber Co., xxv
Stone & Foster Lumber Company, xxiv
Snyder & Son, J. E., upright drills, i
United States Envelope Co., xviii
Union Water Meter Co., water meters, xvi
Walker & Co., O. S., chucks, xx
Warren Hotel, The, xix
Warren, J. F. & W. H., leather belting and mill supplies xxiii
Wheaton & Bowers, photo supplies, viii
Wheelock Fence Company, xxii
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, i
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxviii
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xxvii
Wire Goods Co., wire hardware, x
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., iii
Wood Lumber Co., P. W., xxiii
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xvi
Worcester Machine Screw Co., set, cap and machine screws, xxvii
Worcester Mailing Company, xxiv
Worcester National Bank, ii
Wright Co., M. S., vacuum cleaners, xiii
Wright Wire Co., wire and wire cloth, wire rope, etc. ii
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

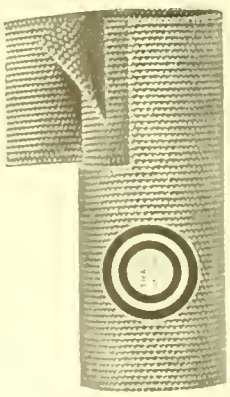
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

The Waste-Paper Man

Thousands of tons of waste printed paper are picked up in the larger cities and towns of the country each year. A vast quantity of this waste material goes back to the paper mills, where it is "treated," and then worked over into new stock.—*Newspaper item.*

THIS, of course, is interesting. Still, you might be more interested if you knew just how much of your advertising goes to the support of the waste-paper man.

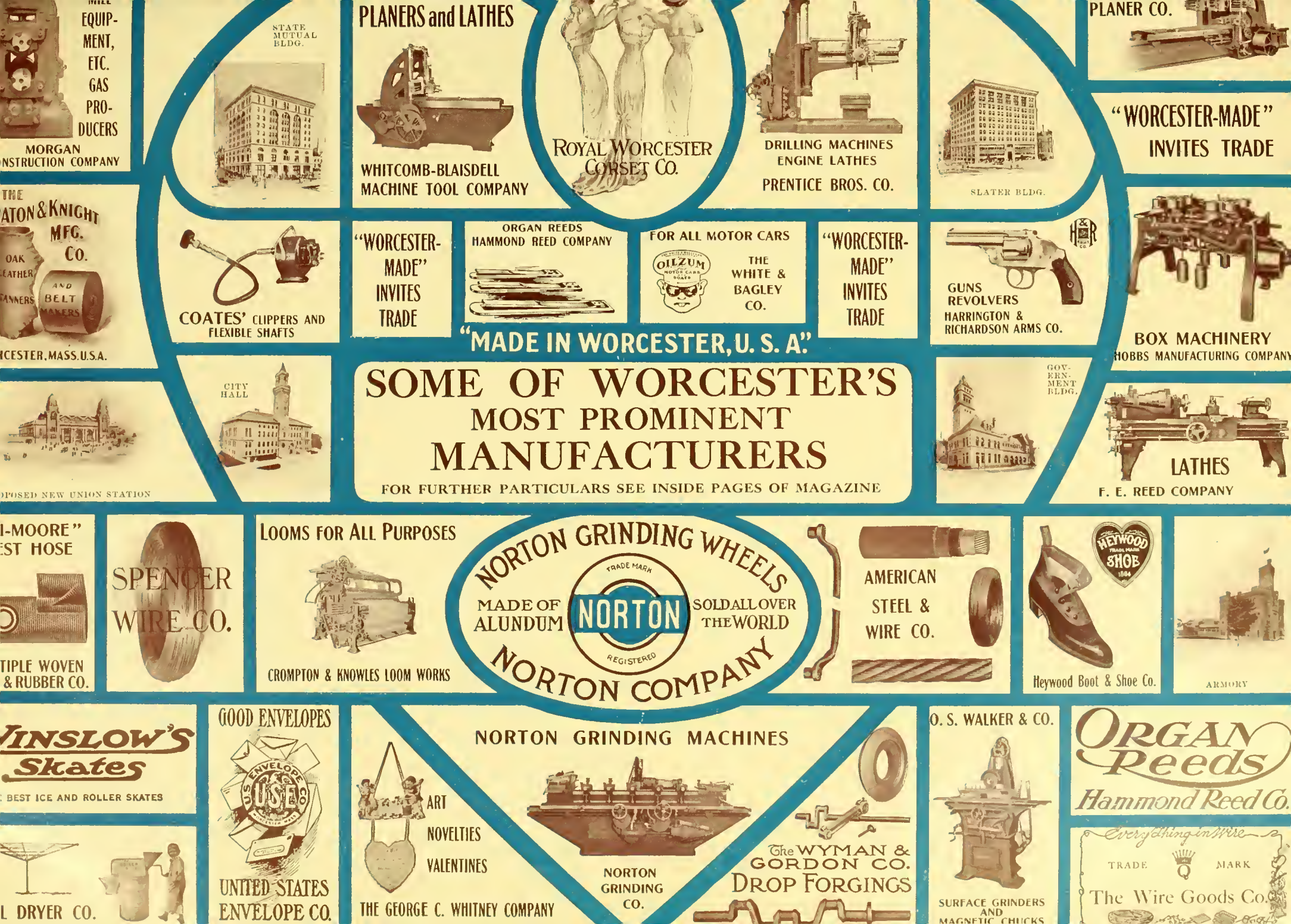
Cheap printing is the greatest feeder of the waste-basket, and incidentally the waste-paper man.

What per cent. are you contributing?

High-grade printing goes to the spot—and sticks. But that spot is not the waste-basket.

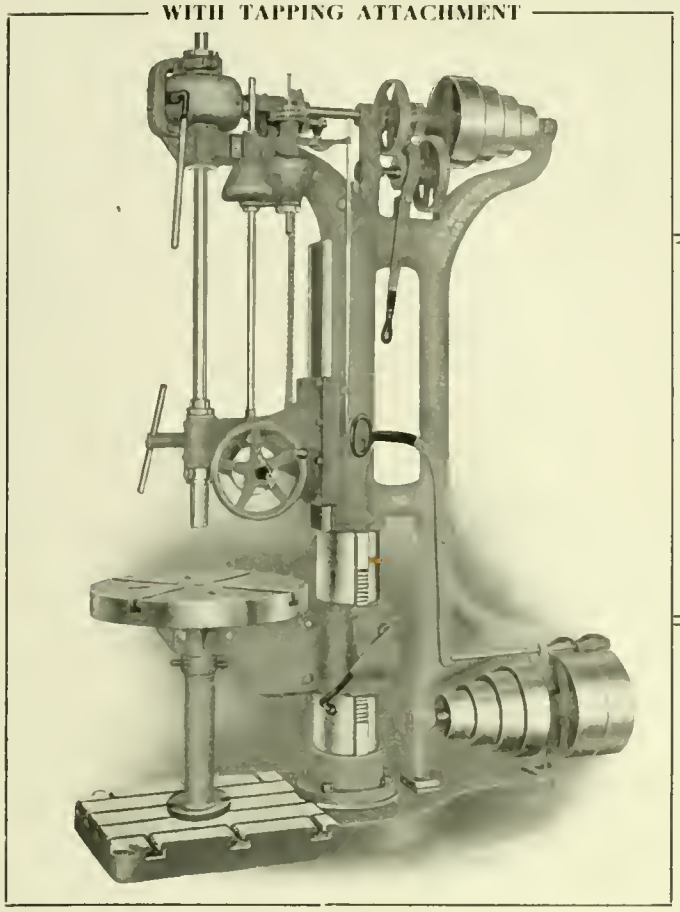
Our *Printing* is the anti-waste-basket kind.

F. S. Blanchard & Co., 6 Walnut Street, Worcester, Mass.


EQUIPMENT, ETC. GAS PRODUCERS
MORGAN
NSTRUCTION COMPANY
STATE MUTUAL BLDG.
PLANERS and LATHES
WHITCOMB-BLAISDELL MACHINE TOOL COMPANY
ROYAL WORCESTER CORSET CO.
DRILLING MACHINES ENGINE LATHES
PRENTICE BROS. CO.
SLATER BLDG.
PLANER CO.
"WORCESTER-MADE" INVITES TRADE
THE
ATON & KNIGHT MFG. CO.
OAK
EATHER
TANNERS
AND
BELT
MAKERS
ICESTER, MASS. U.S.A.
COATES' CLIPPERS AND FLEXIBLE SHAFTS
"WORCESTER-MADE" INVITES TRADE
ORGAN REEDS
HAMMOND REED COMPANY
FOR ALL MOTOR CARS
OILZUM
THE WHITE & BAGLEY CO.
"WORCESTER-MADE" INVITES TRADE
GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.
BOX MACHINERY
HOBBS MANUFACTURING COMPANY
"MADE IN WORCESTER, U. S. A."
SOME OF WORCESTER'S
MOST PROMINENT
MANUFACTURERS
FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE
CITY HALL
OPOSED NEW UNION STATION
GOVERNMENT BLDG.
LATHES
F. E. REED COMPANY
I-MOORE"
EST HOSE
TIPLE WOVEN
& RUBBER CO.
SPENCER WIRE CO.
LOOMS FOR ALL PURPOSES
CROMPTON & KNOWLES LOOM WORKS
NORTON GRINDING WHEELS
TRADE MARK
MADE OF ALUNDUM
NORTON
SOLD ALL OVER THE WORLD
REGISTERED
NORTON COMPANY
AMERICAN STEEL & WIRE CO.
HEYWOOD
TRADE MARK
SHOE
1864
Heywood Boot & Shoe Co.
ARMORY
WINSLOW'S
Skates
BEST ICE AND ROLLER SKATES
GOOD ENVELOPES
U.S. ENVELOPE CO.
USEC
UNITED STATES ENVELOPE CO.
NORTON GRINDING MACHINES
ART
NOVELTIES
VALENTINES
THE GEORGE C. WHITNEY COMPANY
NORTON GRINDING CO.
The WYMAN & GORDON CO.
DROP FORGINGS
O. S. WALKER & CO.
SURFACE GRINDERS AND MAGNETIC CHUCKS
ORGAN
Reeds
Hammond Reed Co.
Everything in Wire
TRADE
MARK
The Wire Goods Co.
L DRYER CO.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

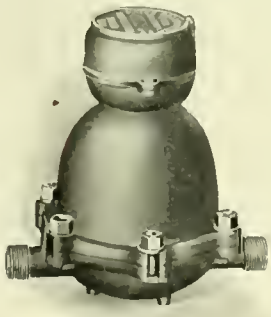
New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

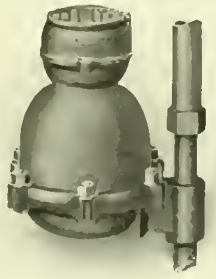
WORCESTER, MASS., U. S. A.

The Leaders

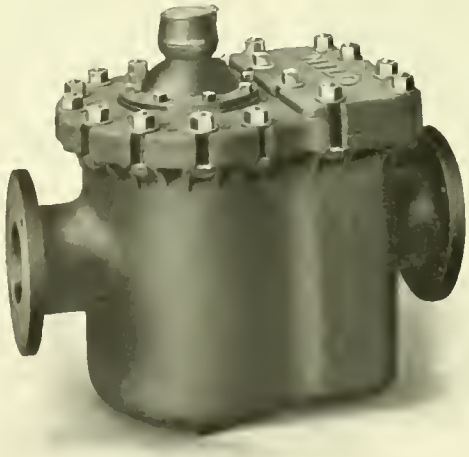
A Postal will bring Catalog W 46



The King Disk Meter

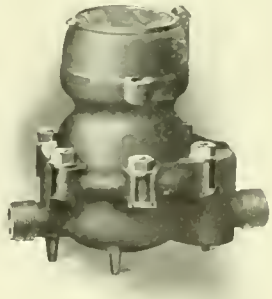


The King Disk Meter for Vertical Setting



Nilo Meter

Union Rotary Meter
Made in Worcester.



Columbia Meter

Union Water Meter Co.

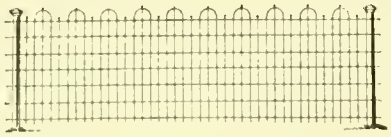
Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

Your Catalog

¶ Just a word about that catalog of yours.

¶ If it is intended to act as a salesman and sell your goods, why not have it attractive and clothed in proper form? Successful houses do not send out their representatives clad in overalls and jumpers.

¶ We have the equipment and "know-how" to take your copy, arrange it in proper form, select the right kind of type, paper, ink and cover and blend them into one harmonious whole, which, when finished, will give it that exclusive character known as **"style."** We are constantly doing it for the most fastidious buyers in New England. We can do it for you. We don't have to tell you what we **will** do, but can show you what we **have** done.

The Commonwealth Press

Oliver B. Wood

50 Foster St., Worcester, Mass.

High Grade Shoes for Men

Factory and Main Office

70 Winter St., Worcester, Mass.

New York Office

127 Duane St., New York City

Retail Store

415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer

Buenes Aires, Argentine Republic

Patterson & Ruhfus

Melbourne and Sydney, Australia

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"DE VARS" Quality

"DE VARS" American Maid Hose-Supporters

"DE VARS" E. Z. B. Suspenders

"DE VARS" Pinon Dress Shields

Made in all sizes and styles

Remember that "DE VARS" is on the BEST Hose-supporters, Suspenders and Shields

American Narrow Fabric Co.

MANUFACTURERS

Worcester, Mass.

SEATTLE CHICAGO NEW YORK BALTIMORE

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Bank Block

Interior Banking Rooms

(The Oldest Bank in Worcester)

Worcester National Bank

11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

"Excelsior" Ornamental Wire Fences

Flower Bed Guard

Trellis

Tree Guards

Guaranteed Rust-Proof
Iron Fences and Gates

WRIGHT WIRE COMPANY

69 Hammond Street
Worcester, Mass.

WAREHOUSES:
Boston,
New York, Philadelphia
Chicago, San Francisco

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

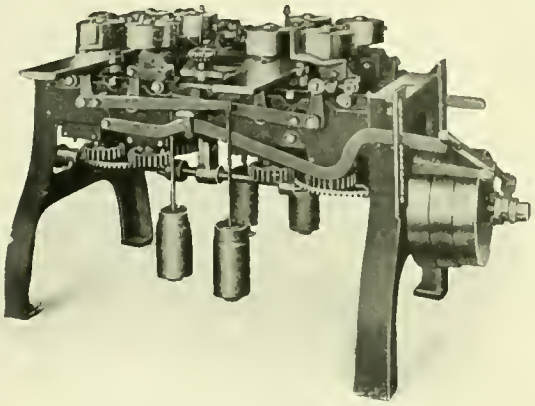
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANION SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

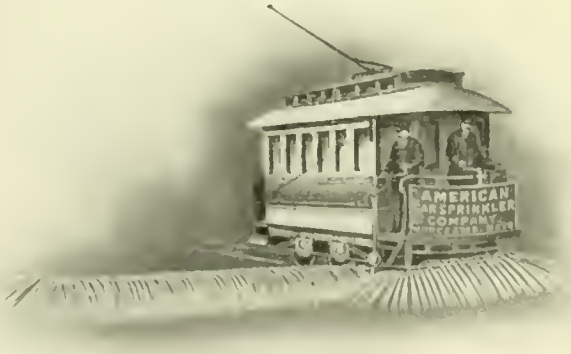
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



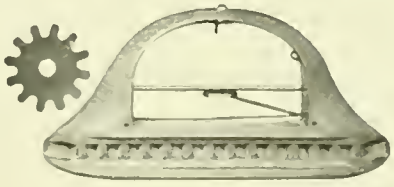
AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Shuttles for Narrow Fabric Looms

We are now prepared to make all kinds of shuttles for narrow fabric looms. Send sample and let me quote you a price. First class work guaranteed.



R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Albert Kelsey and Paul P. Cret, Architects — The Norcross Brothers Co., Builders

FRONT VIEW—INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON, D. C.

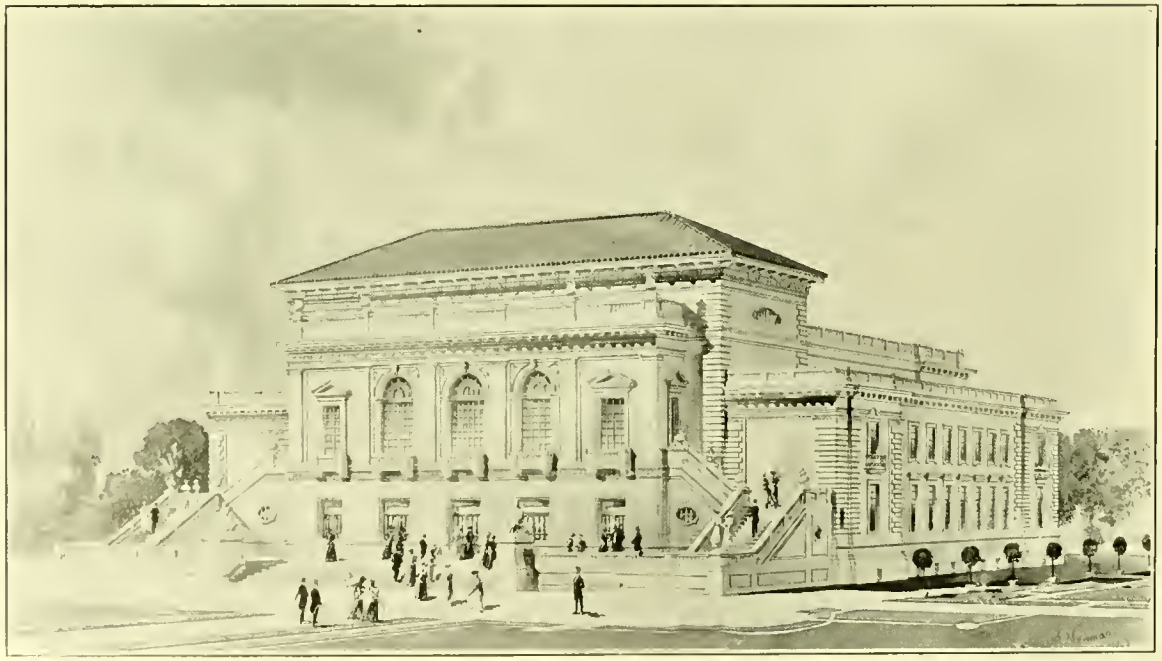
Dedicated April 26, 1910

Built of White Marble from the Quarries of the Southern Marble Company, Marble Hill, Pickens County, Georgia

THE NORCROSS BROTHERS COMPANY

General Contractors and Builders

New York, Boston, Providence, Washington, Worcester



Albert Kelsey and Paul P. Cret, Architects — The Norcross Brothers Co., Builders

REAR VIEW—INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON, D. C.

Dedicated April 26, 1910

Built of White Marble from the Quarries of the Southern Marble Company, Marble Hill, Pickens County, Georgia

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

PRICE PER PAIR, 50 CENTS

If your dealer cannot furnish, write to

Standard Manufacturing Company

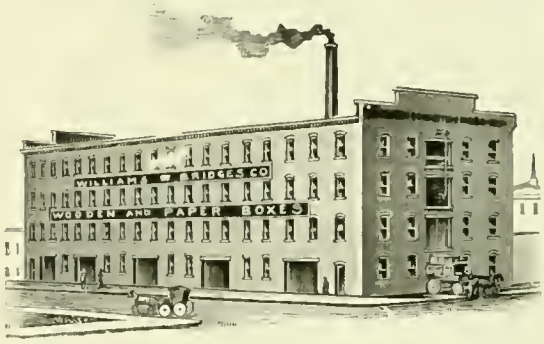
186 Union Street, Worcester, Mass., U.S.A.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES



BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"My fifty-four years' experience as a tanner qualifies me to recommend to you Graton & Knight Mfg. Co.'s leather belting, because I know that the leather in it is tanned by the slow process with but one object in view: to produce leather that is especially fitted for belting."

W. G. Dennison

For prices and further particulars inquire of

The

Graton & Knight Mfg. Co.

Oak Leather Tanners and Belt Makers

Worcester, Mass., U. S. A.

Branches:

Atlanta, Boston, Chicago, Milwaukee, Minneapolis
New York, Philadelphia, Portland, Ore.
San Francisco, Seattle, St. Louis

Made in Worcester.

Our Guarantee

The Eddy Gives a Keen Edge

We place behind every strop sent out the strongest kind of guarantee, and no matter where the strop bearing our name and trade mark may be purchased, we stand ready to make good if by any reason of defect in either material or workmanship it proves unsatisfactory.

THE EDDY COMPANY

42 Southbridge St.

Worcester, Massachusetts

Made in Worcester.

Wheelock Rust Proof Fence, City Hall Plaza

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Goarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

THE VACATION SEASON is at hand. No dwelling house or ordinary safe offers any real security against loss by fire or burglary. This is a good time to secure absolute protection and freedom from anxiety by enlisting the services of the Worcester Safe Deposit Vaults.

Valuables in trunks and boxes are entirely safe and free from corrosion in our vaults. This Company will call for trunks or other large cases, receipt for them at the house, and convey them to the vaults, where they will be registered and certificates of deposit forwarded by mail.

Entrance at the Left of Grand Stairway on the Street Floor

Worcester Safe Deposit Vaults (Incorporated)

WILLIAM D. LUEY
President

JOHN H. GOES
Secretary

HALLECK BARTLETT
Treasurer

OFFICE HOURS
Daily from 9 A. M. to 4 P. M., except on Saturday
Saturday from 9 A. M. to 1 P. M.

State Mutual Building

340 Main Street — Worcester, Mass.

THERE is a subtle charm and grace about all

BON TON CORSETS

which appeals to your finer tastes and excites your admiration and fancy. BON TON Corsets are *absolutely without a rival*, each model an original conception of surpassing excellence in every detail. Batiste or coutil.

PRICES $3 to $15

BOSTON STORE
Denholm & McKay Co.

ALSO SOLE WORCESTER AGENTS FOR

Royal Worcester Corsets	$1 to $3
and Adjusto Corsets	$3 and $5

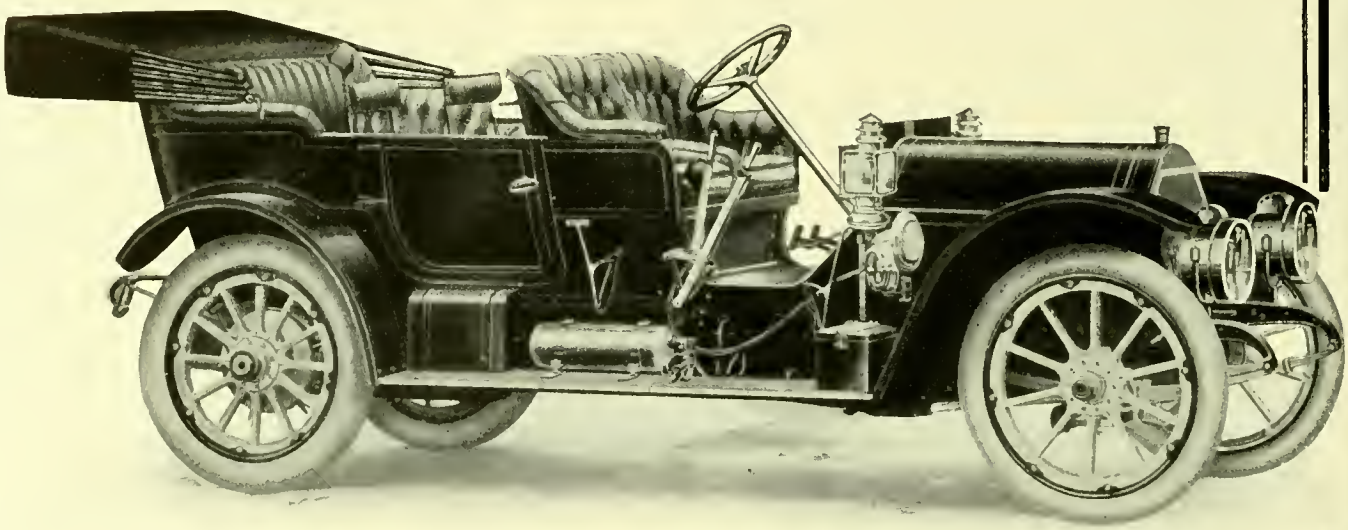
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE WHITE LINE RADIATOR BELONGS TO THE STEARNS

Stearns

Motor Cars

Belong to the people who have the best



30-60 H. P. SEVEN-PASSENGER TOURING CAR

Standard type of touring car | Removable tonneau seats | Either shaft or chain drive

R. H. HIGGINS COMPANY

96 Commercial Street, Worcester, Massachusetts

PHONE 2171

Demonstrations upon request

DEMOUNTABLE RIMS ARE STANDARD EQUIPMENT ON ALL STEARNS CARS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Are You Thinking About Grinding?

WHY not visit our works and let us help you to **know** the **truth** about **Norton Grinding Machines?** We are using **20 Norton Machines** doing commercial work, so that you can see hourly demonstrations. Come and see our machines **cut off stock.** Come, see, hold your watch, and be convinced.

AGENTS

Vonnegut Hardware Co., Indianapolis
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse
Motch & Merryweather Mchy. Co. Cleveland, Detroit, Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver.
Henshaw, Bulkley & Co., San Francisco, Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan

99 N

Norton Grinding Company

Worcester - - - Mass.

Chicago Store: 27 North Canal Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.

Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU'RE ON THE RIGHT TRACK!

LOOK FOR "THE SEMAPHORE"

INDICATES "THE RIGHT OF WAY"

WHEN YOUR MIND IS MADE UP, PLACE ORDERS FOR PRINTING PLATES WITH

OUR CREATIVE AND PHOTO ENGRAVING DEPARTMENTS ARE AT YOUR SERVICE

CARLTON ENGRAVING CO.

Tel. 4550 418 MAIN STREET

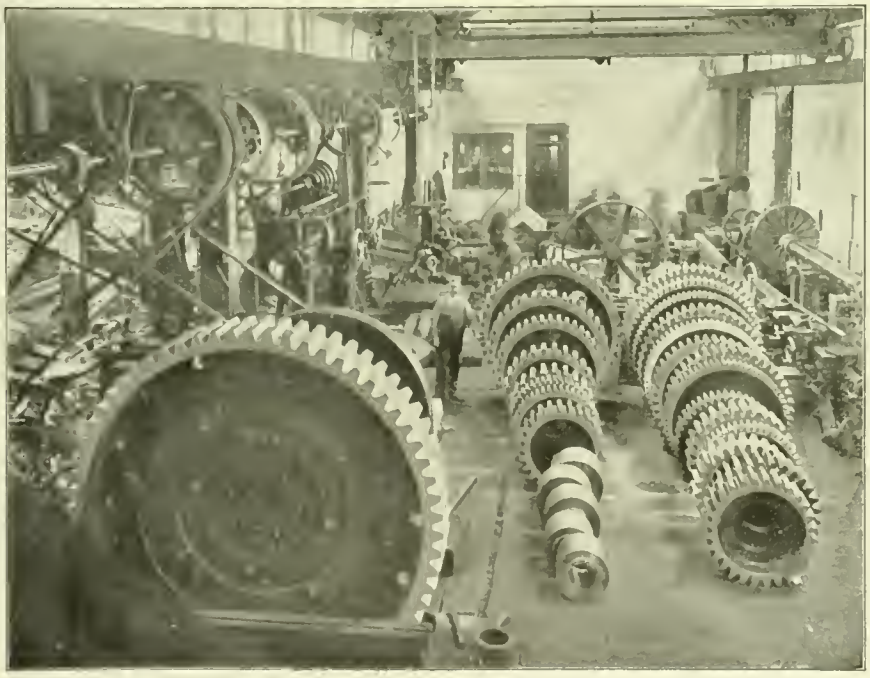
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

U.S. ENVELOPE CO. USE

WORCESTER THE PIONEER CITY OF AMERICA FOR MACHINE-MADE ENVELOPES STILL SETTING THE STANDARD FOR THE COUNTRY.

MORE ENVELOPES ARE MANUFACTURED IN WORCESTER THAN IN ANY OTHER CITY IN THE WORLD

Worcester Plants of the **UNITED STATES ENVELOPE CO.**



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium **MORGAN CONSTRUCTION COMPANY** WORCESTER MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall

MANUFACTURING INVESTMENTS

I undertake financing good manufacturing propositions. Capital, with or without services, introduced to industries recommended by Worcester Board of Trade. Local Securities bought or sold.

Open evenings.

T. A. WICKHAM

406 MAIN ST.

Room 9 — Telephone 5600

ESTABLISHED 1829

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:

BEST MACHINERY STEEL. LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

BEAMS — I — L
STEEL AND IRON
TEES — T

ANGLES AND CHANNELS

BLACKSMITH & CARRIAGE HARDWARE

JUNCTION OF BRIDGE, MECHANIC AND FOSTER STREETS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars

Ferrules and Sheet Metal Specialties

Case Hardening

Nickel, Copper and Brass Plating

also Japanning

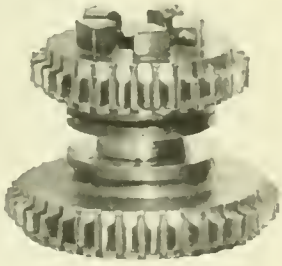
MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

AUTOGENOUS WELDING IN WORCESTER

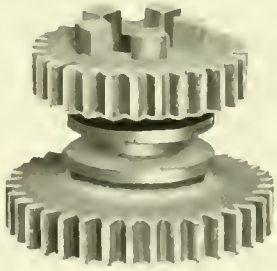
Any broken parts in your machine may now be made



Transmission Sliding Gear
Before Welding

As good as new by

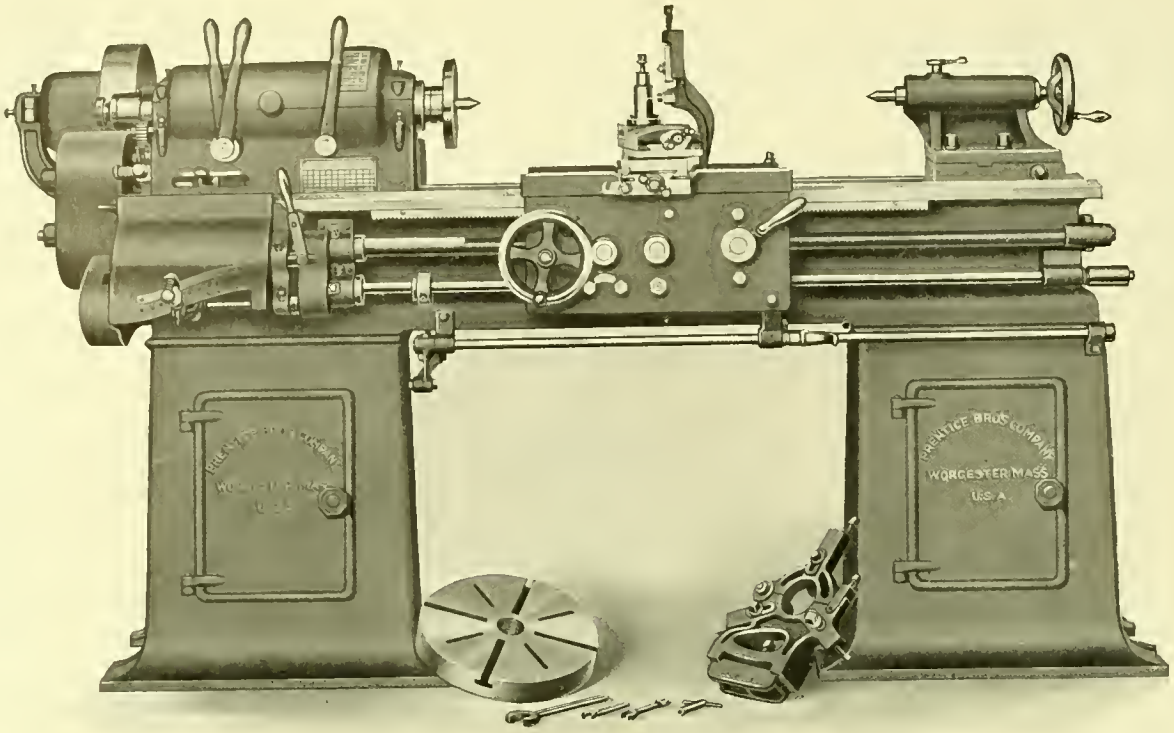
D. A. Baldwin & Co.



Same Gear
After Welding

COMMONWEALTH MOTOR MART, 22 COMMERCIAL ST.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

Manufacturers of

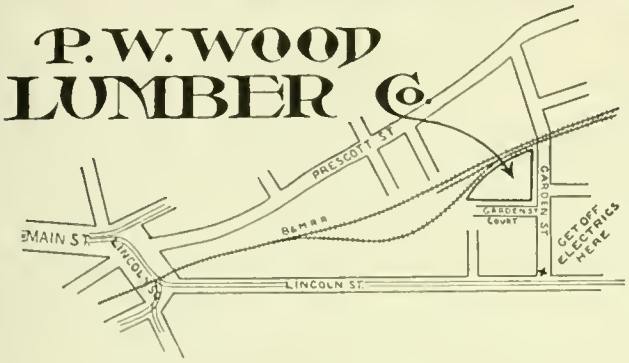
LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.

P. W. WOOD LUMBER Co.



SUCCESSORS TO WORCESTER LUMBER CO.

All kinds of

LUMBER

For Building and Shop Work carried in Stock

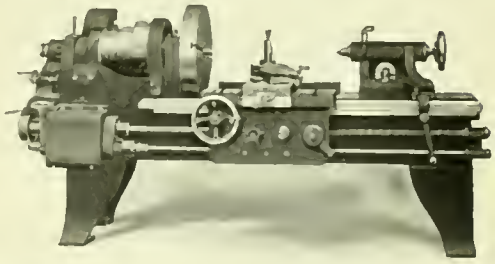
Telephone 3095

11 GARDEN ST.,
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

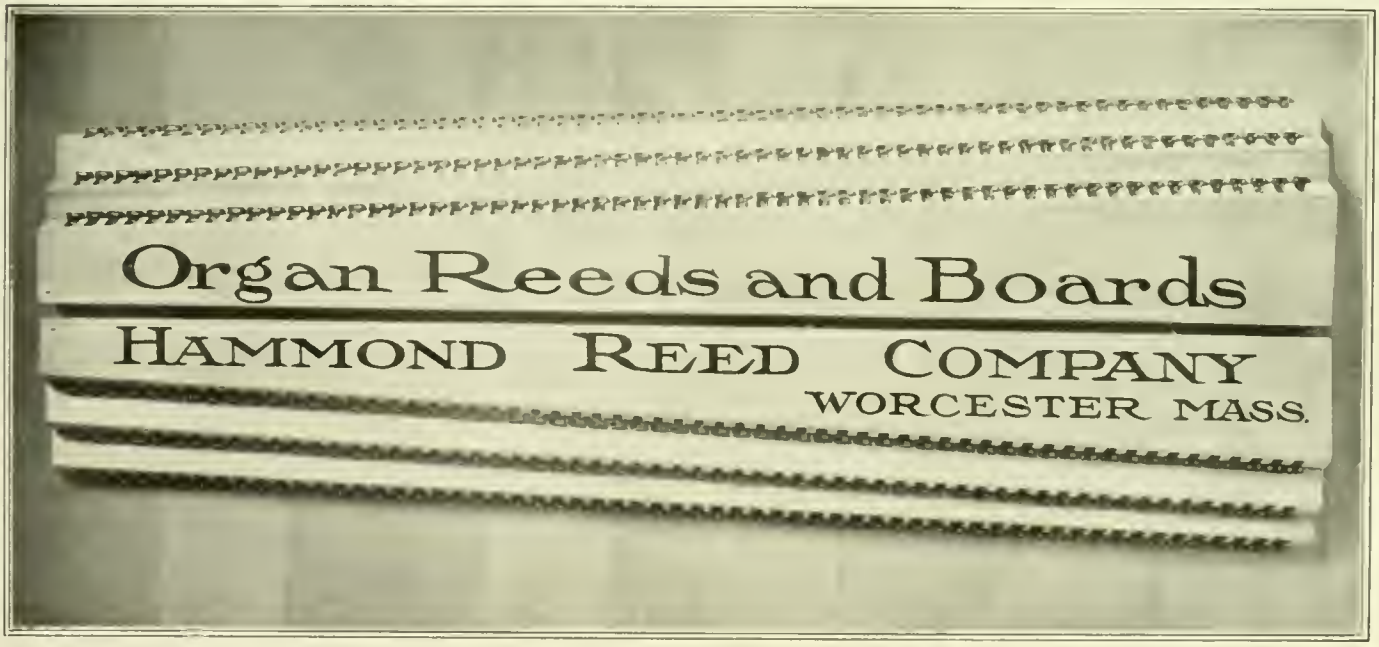


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all description

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE THREE LEADING HOTELS OF WORCESTER MEMBERS OF THE NEW ENGLAND : : HOTEL MEN'S ASSOCIATION : :

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

THE

Bay State House

In the Banking District, and one block from Mechanics Hall and Worcester's leading theatre

European Plan Club Breakfasts

Long Distance Phones in Every Room

283 MAIN STREET

G. A. KEELER, Formerly of Hotel Essex, Boston

Opposite City Hall Park

New Park Hotel

Home-like and Attractive

Excellent Cuisine

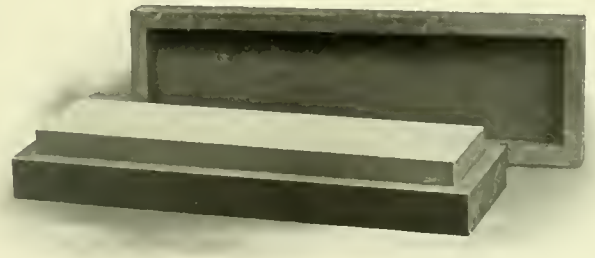
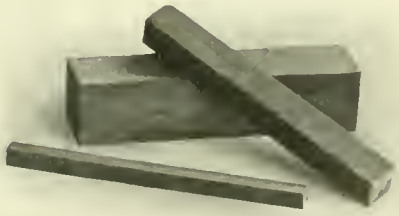
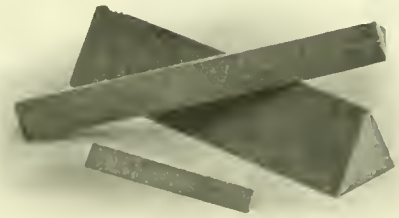
57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

INDIA OIL STONES

Sixty-four different shapes. Coarse, medium and fine grits. Bench sizes furnished in combination grits—coarse and medium, and coarse and fine. India Oil Stones are known and used all over the world. The India cutting quality is recognized wherever edged tools are used to any great extent.

MANUFACTURED BY

NORTON COMPANY

WORCESTER, MASS.

Sole Selling Agents for India Oil Stones

Pike Manufacturing Co., Pike, N. H.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE OLDEST FAMILY WINE STORE IN WORCESTER

ESTABLISHED NOVEMBER 7, 1854

Our New Store

NOW OPEN

We carry the best of everything in our line at our New Establishment

We are Sole Owners of the Brands—

Eastbourne Rye
R. L. Moore
Old Reserve
} Whiskey

also Old February Punch.

Sole Agents for

ORIGINAL BUDWEISER AND SCHLITZ LAGER | BREWERY BOTTLING

NARRAGANSETT SELECT STOCK

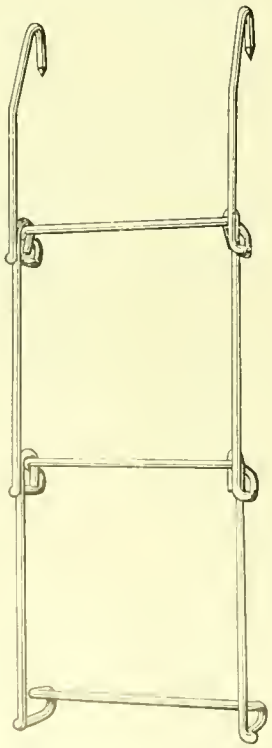
PROVIDENCE BREWING CO. BOHEMIAN XXX ALE

E. S. PIERCE COMPANY

69-71-73 MECHANIC STREET AND 40 MERCANTILE STREET

WORCESTER, MASS.

The Ladder that Saves Time and Money



Made in 1-foot sections; therefore can be made any length at will.

For fire escapes and all purposes.

Remember the name—

Acme

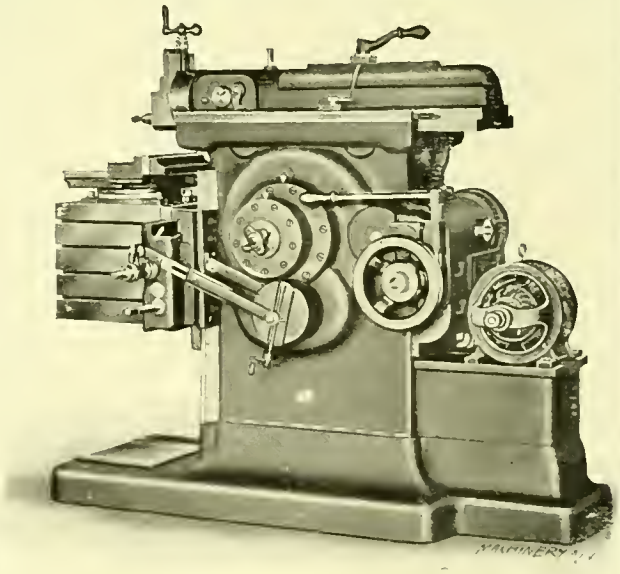
Made in Worcester

The Acme Steel Ladder Company

56 Hermon Street, Worcester, Mass.

STOCKBRIDGE

New 18″ Shaper All-Geared Drive



Originality characterizes Stockbridge Shapers

STOCKBRIDGE MACHINE CO.

WORCESTER, MASS., U.S.A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*

Iroquois Bohemian Lager, *Frank Jones' Golden Ale*

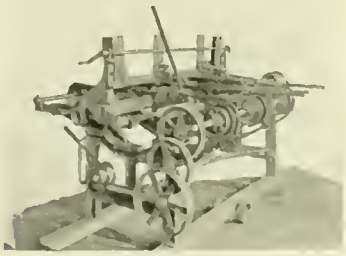
and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street

Telephone 2455 *Worcester, Mass.*



COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
300 MAIN ST.
WORCESTER, MASS.

MODELING
WOOD CARVING

Models for Wood, Stone, Metal, Plaster, Cement

Architectural and Decorative Ornaments in Plaster, Papier-Maché and Composition

L. C. Hamill

94 Commercial Street

Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

OUR KODAK GIRL

Evinces her satisfaction not only with her

CAMERA

which she bought of us, but also with her

PICTURES

which we develop and print for her. So would YOU.

Drop in and get her picture on a Post Card.

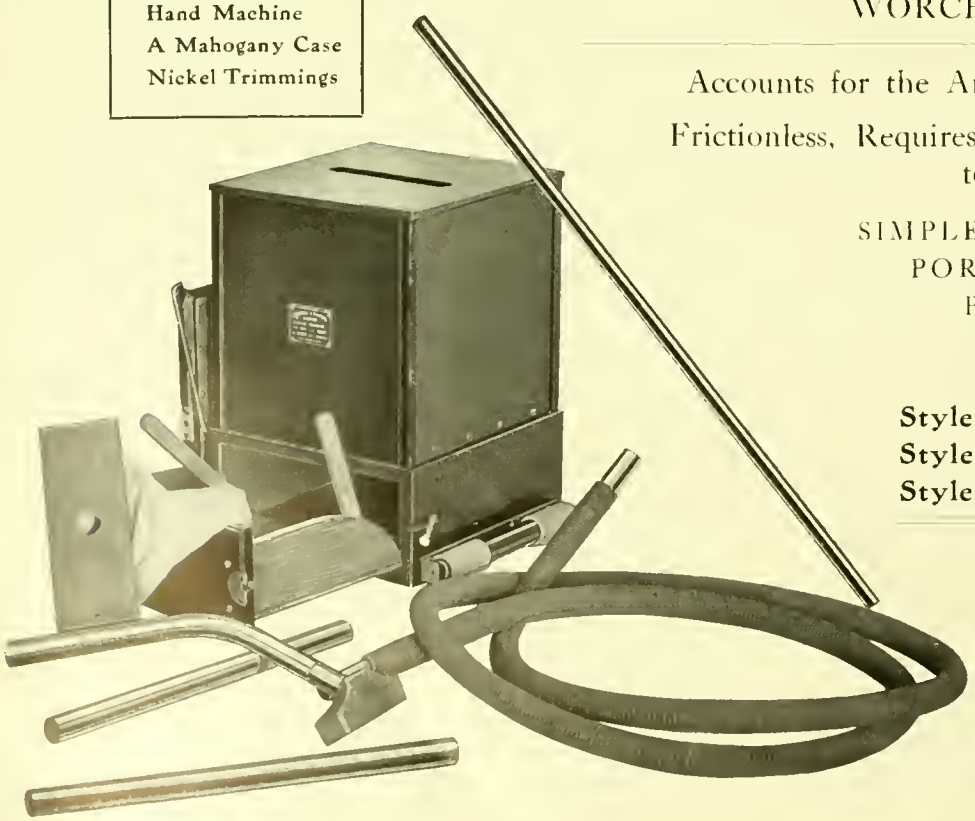
WHEATON & BOWERS

PHOTO DEPARTMENT
366 MAIN STREET, WORCESTER
PHONE 2128

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style B, Electric, - - -	125
Style C, Electric, for Hotels, etc.	150

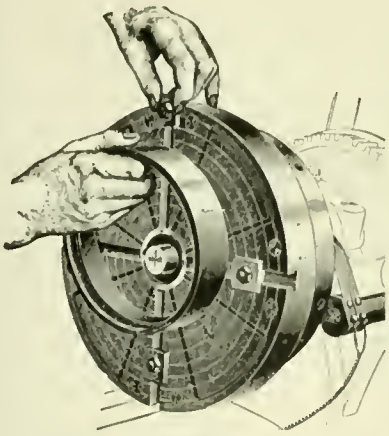
M. S. Wright Co.

Manufacturers
Worcester

Pneuvac Company

Blake Building
Boston, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 MASS.

Made in Worcester.

BABY CARRIAGE
BICYCLE
CARRIAGE
MOTORCYCLE
AUTOMOBILE

TIRES

PRICES RIGHT

24 AUSTIN ST., WORCESTER TEL. 6239-2

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.
Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

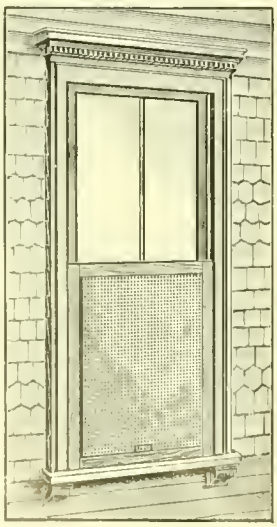
"VOGUE" PAPERS

ARE MADE BY

ALLEN-HIGGINS WALL PAPER CO.

WORCESTER

Made in Worcester.



THE BRANNON SLIDING SCREEN

Made in Worcester.

1874 HENRY BRANNON 1910 HENRY G. BRANNON

HENRY BRANNON & SON

MANUFACTURERS OF

Builders' Finish, Store and Office Fixtures

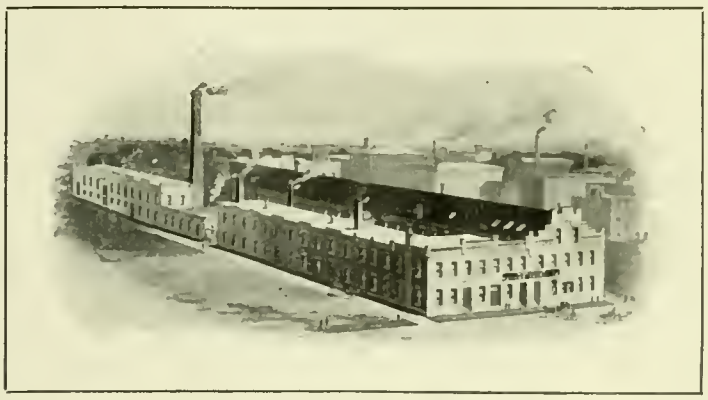
WINDOW AND DOOR

SCREENS

Dowels
Mouldings
Wire Cloth
Doors
Windows
Window Frames
Stairs
Book-Cases
Band Sawing
Jig Sawing
Sanding
Lumber
Mill Work

21-29 CYPRESS STREET, WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

Progress Pictures
Erwin Cotton Mills

Durham, N. C.

F. P. SHELDON & SONS
Engineers

BLEACHERY, 253′ x 128′

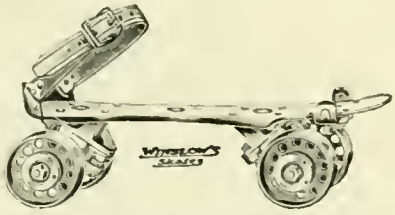
WEAVE SHED, 300′ x 300′

FISKE-CARTER CONSTRUCTION CO.

Builders

Worcester, Mass.

OFFICES
11 Foster Street
Spartanburg, S. C. Greenville, S. C.



Winslow's Number 17 Ball Bearing Rink Skate for Men Fitted with "WEB" Steel Rolls

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

Please Send for New Catalogues.

THE SAMUEL WINSLOW SKATE MFG. CO., WORCESTER, MASS., U.S.A.

New York, 84 Chambers St. London, 8 Long Lane, E. C.
Paris, 64 Avenue de la Grande-Armee

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Acme Ladder Company, xxiv
Adams & Powers, doors, sash and blinds, xxvii
Allen-Higgins Wall Paper Co., xxviii
American Car Sprinkler Co., car sprinklers, v
American Narrow Fabric Co., iii
Bay State House, xxii
Blake, Jr., & Co., George F., iron and steel, and supplies, xviii
Blanchard & Co., F. S., printers, Back cover
Brannon & Son, Henry, xxviii
Brownell, George L., twisting and spinning machinery xxx
Carlton Engraving Co., xvi
Case Shoe Co., Chas., xvii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, ii
Commonwealth Motor Mart, xix
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, xxv
DeLong, W. H., dental disks, xxvii
Eddy Company, viii
Fiske-Carter Co., general contractors, xxix
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxi
Hamill, L. C., xxv
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxv
Heywood Boot & Shoe Co., fine shoes, ii
Higgins Co., R. H., Stearns Cars, xiv
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xx
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xxvii
Jackson St. Foundry, iron castings, xix
Kidder, R. E., drawing tables, v
Luce, E. B., commercial photographer, xxi
Morgan Construction Co., rolling mill equipment, xvii
Matthews Mfg. Co., stove trimmings, ferrules, etc., xix
Multiple Woven Hose & Rubber Co., fire hose and belting xxx
New England Anchor Fence Co., ii
New England Audit Co., xii
N. E. Motor Supply Co., xxvii
New Park Hotel, xxii
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xxiii
Norton Grinding Co., grinding machines, xv
People's Savings Bank, x
Pierce Company, R. S., xxiv
Pond Machine & Foundry Co., xix
Post & Lester Co., xi
Powers Company, F. E., coal, xvi
Pratt & Inman, iron and steel, xviii
Prentice Bros. Company, drilling machines, engine lathes xx
Provident Life & Trust Co., xii
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robbins Machine Co., lathes, xii
Royal Worcester Corset Co., xiii
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xix
Standard Mfg. Co., vii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xxiv
Stone & Foster Lumber Company, xxviii
Snyder & Son, J. E., upright drills, i
United States Envelope Co., xvii
Union Water Meter Co., water meters, i
Walker & Co., O. S., chucks, xx
Warren Hotel, The, xxii
Warren, J. F. & W. H., leather belting and mill supplies xxi
Wheaton & Bowers, photo supplies, xxvi
Wheelock Fence Company, viii
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, Back cover
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxx
Wickham, T. A., xviii
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xxix
Wire Goods Co., wire hardware, x
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xxvi
Wood Lumber Co., P. W., xxi
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xviii
Worcester Machine Screw Co., set, cap and machine screws, xxix
Worcester Mailing Company, xxiv
Worcester National Bank, ii
Worcester Safe Deposit Vaults, xiii
Wright Co., M. S., vacuum cleaners, xiii
Wright Wire Co., wire and wire cloth, wire rope, etc. ii
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

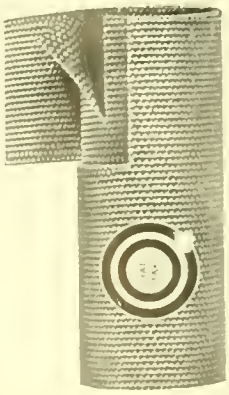
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

The Waste-Paper Man

Thousands of tons of waste printed paper are picked up in the larger cities and towns of the country each year. A vast quantity of this waste material goes back to the paper mills, where it is "treated," and then worked over into new stock.—*Newspaper item.*

THIS, of course, is interesting. Still, you might be more interested if you knew just how much of your advertising goes to the support of the waste-paper man.

Cheap printing is the greatest feeder of the waste-basket, and incidentally the waste-paper man.

What per cent. are you contributing?

High-grade printing goes to the spot—and sticks. But that spot is not the waste-basket.

Our *Printing* is the anti-waste-basket kind.

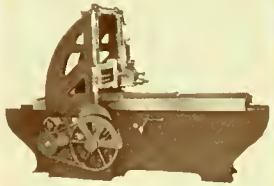
F. S. Blanchard & Co., 6 Walnut Street, Worcester, Mass.

MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN NSTRUCTION COMPANY

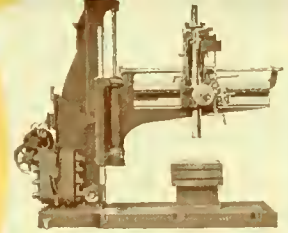
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES
PRENTICE BROS. CO.

SLATER BLDG

PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE ATON & KNIGHT MFG. CO.

OAK LEATHER TANNERS AND BELT MAKERS

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

ORGAN REEDS
HAMMOND REED COMPANY

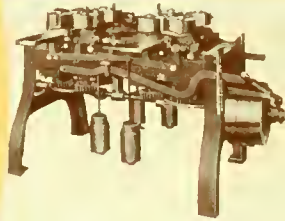
FOR ALL MOTOR CARS

OILZUM MOTOR CARS BOSTON

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

PROPOSED NEW UNION STATION

CITY HALL

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

GOVERNMENT BLDG.

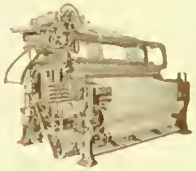
LATHES
F. E. REED COMPANY

"I-MOORE" EST HOSE

TIPLE WOVEN & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK ALUNDUM REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

HEYWOOD FOUR-MAN SHOE 1864

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

LL DRYER CO.

GOOD ENVELOPES

U.S. ENVELOPE USE

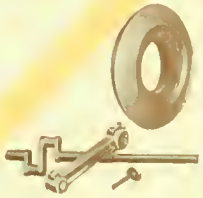
UNITED STATES ENVELOPE CO.

ART
NOVELTIES
VALENTINES

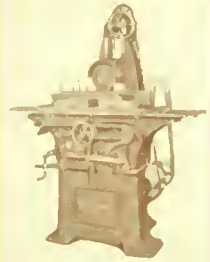
THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES

NORTON GRINDING CO.



The WYMAN & GORDON CO.
DROP FORGINGS



O. S. WALKER & CO.

SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.

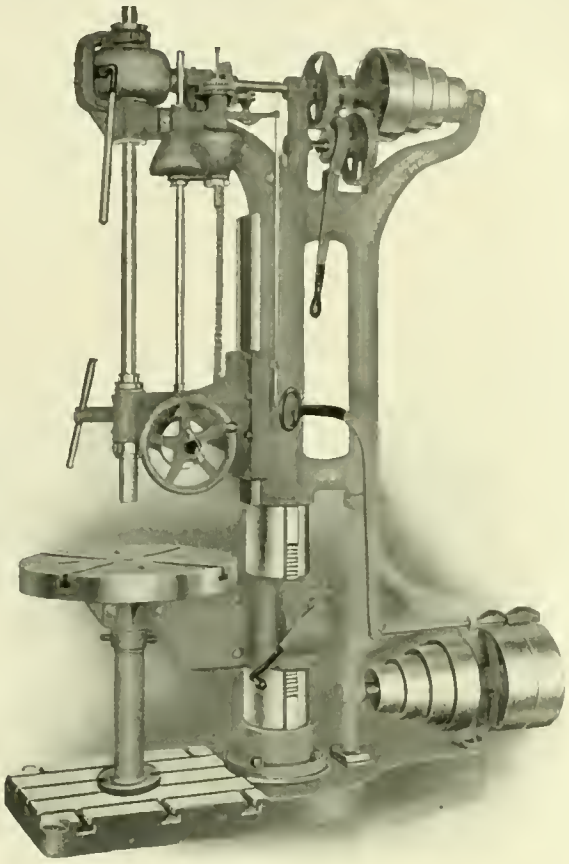
Everything in Wire

TRADE MARK

The Wire Goods Co.

"Snyder's" 30″ Standard Drill

WITH TAPPING ATTACHMENT



For Twenty-five Years we have made an Exclusive Specialty of Building

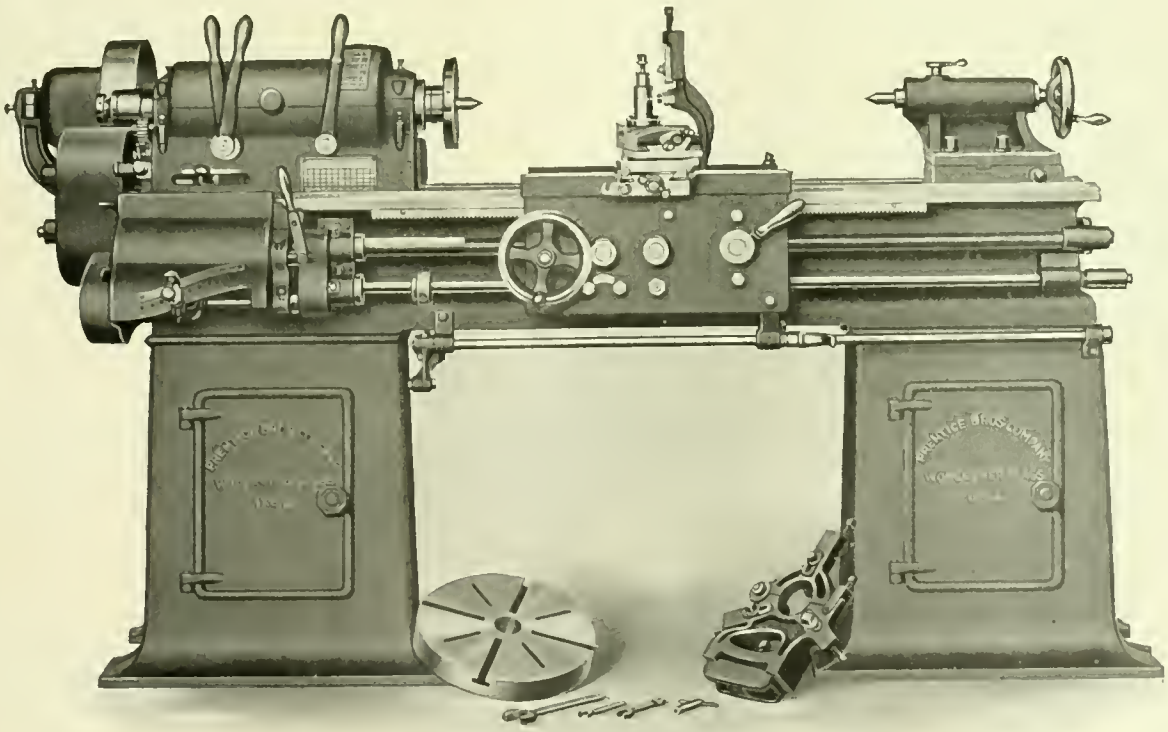
HIGH GRADE UPRIGHT DRILLING MACHINES

and during all these years it has been our constant endeavor to produce as good machines as skilled mechanics and the best stock could make. Our Drills are being used in nearly all parts of the civilized world. We have sold about three-fourths of all the manufacturers of our own city, which fact alone is a sufficient guarantee of their excellence, as Worcester Manufacturers buy the best machinery made. We build all sizes, from 20″ to 36″, inclusive. Our machines are furnished with Tapping Attachment, Gear Motor Drive, Belt Motor Drive, Compound Table, and Geared Revolving Table.

New Catalogue now ready and sent to all prospective buyers

J. E. SNYDER & SON

WORCESTER, MASS., U. S. A.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

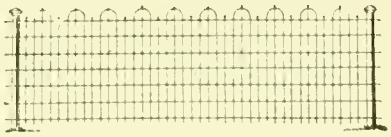
Upright and Radial Drilling Machines and Engine Lathes

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

Your Catalog

¶ Just a word about that catalog of yours.

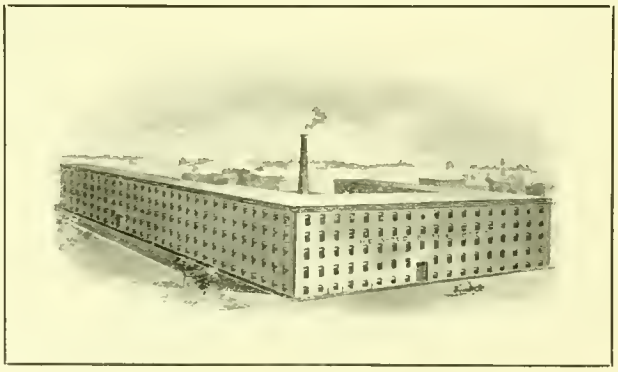
¶ If it is intended to act as a salesman and sell your goods, why not have it attractive and clothed in proper form? Successful houses do not send out their representatives clad in overalls and jumpers.

¶ We have the equipment and "know-how" to take your copy, arrange it in proper form, select the right kind of type, paper, ink and cover and blend them into one harmonious whole, which, when finished, will give it that exclusive character known as **"style."** We are constantly doing it for the most fastidious buyers in New England. We can do it for you. We don't have to tell you what we **will** do, but can show you what we **have** done.

The Commonwealth Press

Oliver B. Wood

50 Foster St., Worcester, Mass.



High Grade Shoes for Men

Factory and Main Office

70 Winter St., Worcester, Mass.

New York Office

127 Duane St., New York City

Retail Store

415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer

Buenes Aires, Argentine Republic

Patterson & Ruhtus

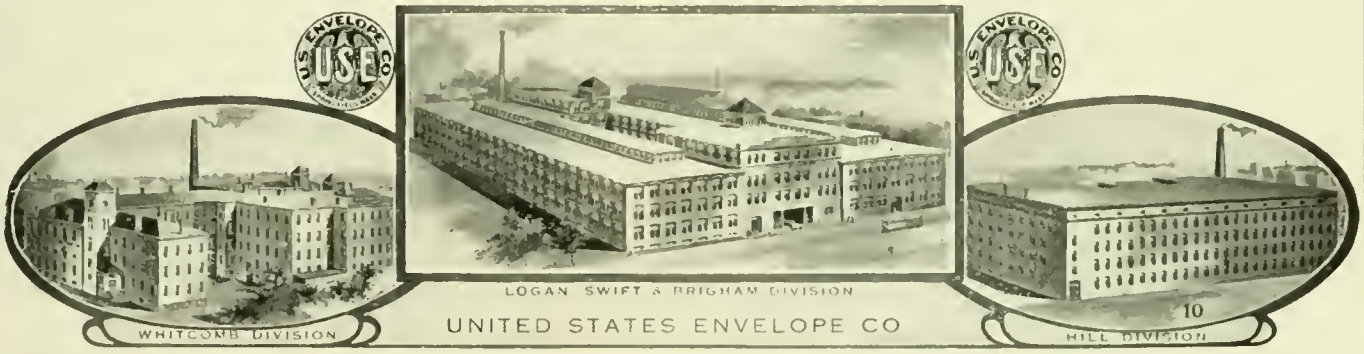
Melbourne and Sydney, Australia

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

United States Envelope Company

Manufacturers of Standard **Envelopes**



The Outlook Envelope

Insures economy and absolute accuracy in the addressing of all your mail matter.

The Improved
Columbian Clasp Envelope

The best and most satisfactory merchandise envelope made.

Specialists in STEEL DIE STAMPING

or Commercial Work. Samples and Prices of our Standard Goods furnished by your Stationer or Printer

Made in Worcester.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

Bank Block

Interior Banking Rooms

(The Oldest Bank in Worcester)

Worcester National Bank

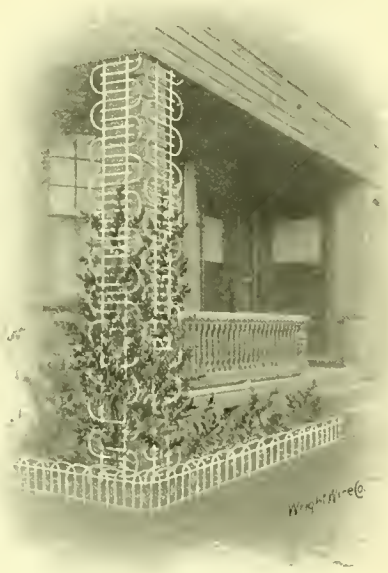
11 Foster Street

Modern Equipment
Careful Administration

Safe Deposit Vaults
Storage Vaults

"Excelsior" Ornamental Wire Fences

Flower Bed Guard



Trellis

Tree Guards

Guaranteed Rust-Proof
Iron Fences and Gates

WRIGHT WIRE COMPANY

69 Hammond Street
Worcester, Mass.

WAREHOUSES:
Boston,
New York, Philadelphia
Chicago, San Francisco

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

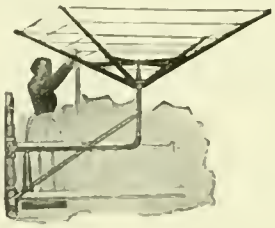
Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.



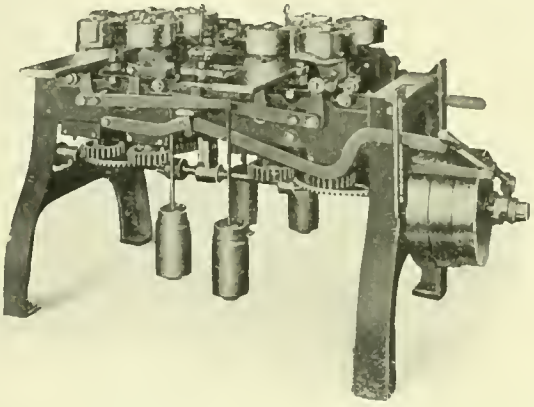
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

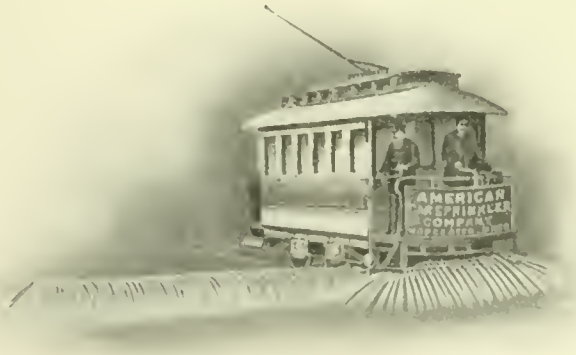
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



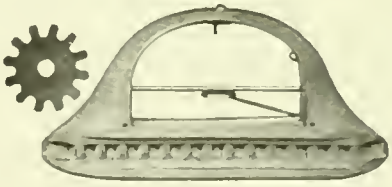
AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Shuttles for Narrow Fabric Looms

We are now prepared to make all kinds of shuttles for narrow fabric looms. Send sample and let me quote you a price. First class work guaranteed.



R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

ALBERT KELSEY AND PAUL P. CRET, ARCHITECTS — THE NORCROSS BROTHERS CO., BUILDERS

FRONT VIEW—INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON, D. C.

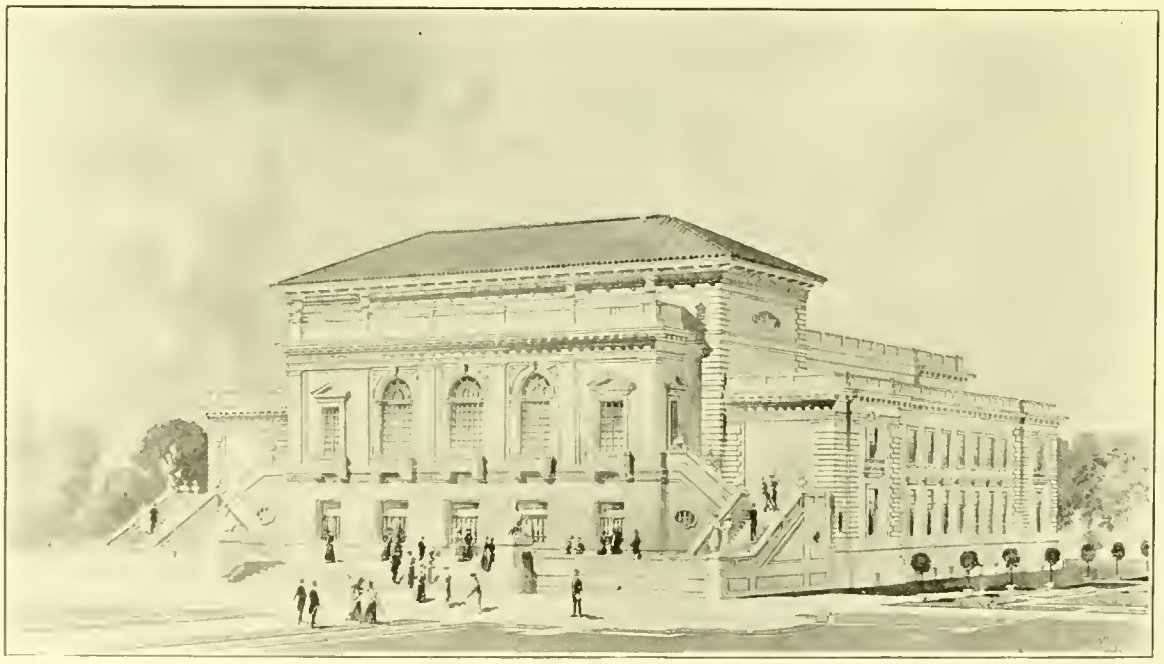
Dedicated April 26, 1910

Built of White Marble from the Quarries of the Southern Marble Company, Marble Hill, Pickens County, Georgia

THE NORCROSS BROTHERS COMPANY

General Contractors and Builders

New York, Boston, Providence, Washington, Worcester



ALBERT KELSEY AND PAUL P. CRET, ARCHITECTS — THE NORCROSS BROTHERS CO., BUILDERS

REAR VIEW—INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON, D. C.

Dedicated April 26, 1910

Built of White Marble from the Quarries of the Southern Marble Company, Marble Hill, Pickens County, Georgia

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

PRICE PER PAIR, 50 CENTS

If your dealer cannot furnish, write to

Standard Manufacturing Company

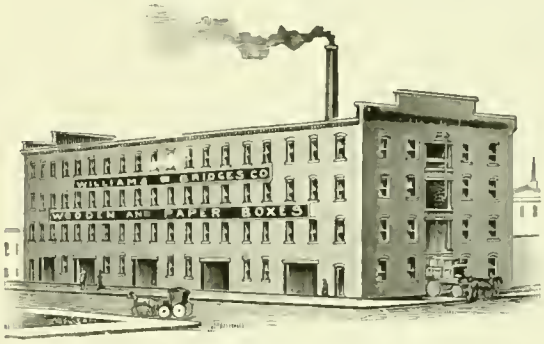
186 Union Street, Worcester, Mass., U.S.A.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES



BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

1851 G&K 1910

TRADE MARK
REG. U. S. PAT. OFF.

THE fifty-nine years between 1851 and 1910 are appropriately bridged by the "G. & K." trade mark. This trade mark is the embodiment of fifty-nine successful years' experience as belt makers, forty-three of which we have been tanners also. It represents the growth of a business which in the sixties was practically unknown outside of Worcester, and which to-day has an established reputation in every State in the Union as well as in Canada, Mexico, Europe and other foreign countries. It represents the growth of an idea into an accepted fact, that it pays, and pays handsomely, to use belting especially adapted to the conditions under which it has to run, regardless of first cost. It represents the "square deal" as between the dealer, consumer and manufacturer. It represents the highest standard of quality.

Look for these trade marks; they are stamped every ten feet on the belting which we produce

Leather belting and other G. & K. products, such as lace leather, leather packings, belt dressings, belt cement, are carried in stock by dealers and supply houses located in the principal manufacturing centers; each of our branches mentioned below also carries a complete stock.

THE GRATON & KNIGHT MFG. CO., Oak Leather Tanners and Belt Makers, Worcester, Mass.

BRANCHES: Atlanta, Ga.; Boston, Mass.; Chicago, Ill.; Milwaukee, Wis.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Pa.; Portland, Ore.; San Francisco, Cal.; Seattle, Wash.; St. Louis, Mo.

Our Guarantee

The Eddy Gives a Keen Edge

We place behind every strop sent out the strongest kind of guarantee, and no matter where the strop bearing our name and trade mark may be purchased, we stand ready to make good if by any reason of defect in either material or workmanship it proves unsatisfactory.

THE EDDY COMPANY

42 Southbridge St.

Worcester, Massachusetts

Made in Worcester.

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

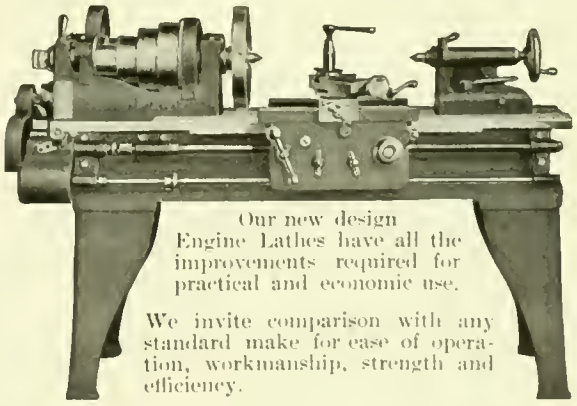
New England Audit Company

Springfield — Court Square Building

Worcester — State Mutuel Building

Prospectus containing one hundred references mailed upon request.

ROBBINS ENGINE LATHES



Our new design Engine Lathes have all the improvements required for practical and economic use.

We invite comparison with any standard make for ease of operation, workmanship, strength and efficiency.

12, 14 and 16 inch sizes

Send for Circulars

THE ROBBINS MACHINE CO.

150 E. Lagrange St., Worcester, Mass., U. S. A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A MAN'S house should be on the hilltop of cheerfulness and serenity, so high that no shadows rest upon it, and where the morning comes so early and the evening tarries so late that the day has twice as many golden hours as those of other men.—*Henry Ward Beecher.*

GOVERNED by the principle of offering an ideal and desirable home-site, where the discriminating business and professional men of Worcester might buy or build homes, THE O'CONNELL REAL ESTATE COMPANY offers

LENOX

the home-site beautiful, on Pleasant Street, opposite Richmond Heights, ten minutes from City Hall. Endowed by nature with beautiful location, superb outlook and invigorating air, and developed with an idea of appealing to those who appreciate healthful and refined surroundings.

Executive Offices corner Main and Pleasant Streets

Members Massachusetts Real Estate Exchange

Representatives at LENOX daily and Sundays to show you the property. Call or send for plans, prices and particulars, and our booklet entitled "The Beauty Spot of Worcester."

You Say "Good Morning" to GOOD NEIGHBORS LENOX

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

View of men at work on high-grade development at LENOX

Over $60,000 are being expended in improvements at

LENOX

The Home-site Beautiful

Ten minutes from City Hall — *On Pleasant Street, opposite Richmond Heights*

THE granolithic walks, curbing and gutters, the handsome entrance scheme, the beautiful Chamberlain Parkway represent the finest type of development work and public improvements. Large lots, wide streets, water, sewers, gas, electric lights, every city convenience. The natural charms and ideal surroundings combine to make LENOX home-sites the best residential real estate offerings in Worcester for home-seekers and investors. They are THE BEST AT THE PRICE OF THE ORDINARY.

Representatives at LENOX daily and Sundays to show you the property. Call or send for plans, prices and particulars, and our booklet entitled "The Beauty Spot of Worcester"

You Say "Good Morning" to Good Neighbors at LENOX

THE O'CONNELL REAL ESTATE COMPANY

Members Massachusetts Real Estate Exchange

Executive Offices corner Main and Pleasant Streets

Telephone 2088

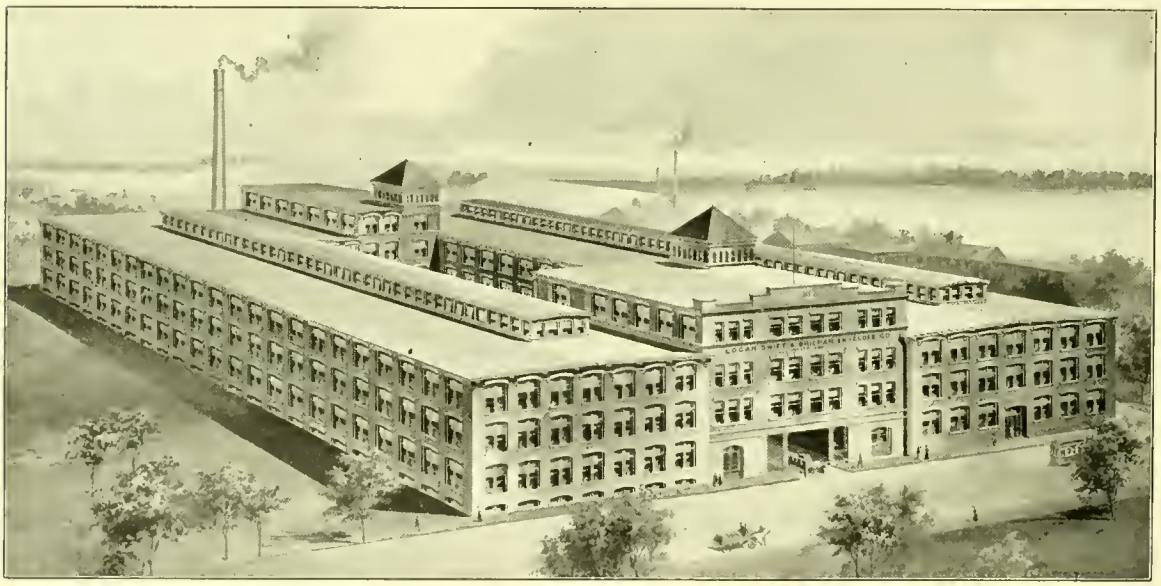
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Summer Residence, Alexander Bowler, Gloucester, Mass.

Residence, Joseph M. Davis, Grove St., Worcester

JOHN P. KINGSTON, ARCHITECT

Knowles Building, Worcester



LOGAN, SWIFT & BRIGHAM DIVISION, UNITED STATES ENVELOPE CO.

Residence, Thomas J. Cronin, Holden St., Worcester

Double Residence, Edwin J. Whalen, Hillside, Worcester

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

250,000 square feet reinforced concrete roof, together with construction of coal pocket and power plant foundations, completed in three months

Worcester People Do Not Realize the Broad Scope of Our Work

WE will endeavor to show you, from month to month, proofs of our ability to handle contracts calling for careful reinforced concrete construction.

THE GEORGE W. CARR COMPANY (H. C. WILSON)

Engineers and Contractors

518 Main Street, Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ONCE AN HOUR LIMITED

Limited Cars leave Worcester, City Hall and Union Station (daily except Sundays), at 7.05 A. M. and every 60 minutes until 5.05 P. M.

Leave Boston, Park Square, at 9.00 A. M. and every 60 minutes until 6.00 P. M.

Running time, one hour and fifty minutes, regular fares.

Round trip rates, One Dollar.

One way rates, Fifty-five cents.

Local cars every thirty minutes.

Try the Clean, Comfortable, Fast Line. Lowest Fares.

WHITE'S CORNERS.

BOSTON & WORCESTER STREET RAILWAY CO.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Specialties that You Can Rely Upon

Buck & Co. "Best" Auto Oil
Powero Gasoline
Brilliantene—150 Fancy Water White Kerosene
Special Incubator and Brooder Oil

We also carry in stock a very large line of machinery oils and greases, steam cylinder, wool, lard and cutting oil

E. A. BUCK & CO.

Corner East Worcester and Casco Sts., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

DAVID B. RICE, PRESIDENT — SEE US FOR MILL AND LAUNDRY SOAPS — HERBERT E. HOWE, TREASURER

R. AND H. AUTO OILS AND SOAPS, LARD OIL SUBSTITUTE, RUB ROLL OIL

LOCAL AGENTS FOR ARLINGTON MFG. CO., TECHNICAL PAINTMAKERS, SANITARY COLD WATER PAINT

ALSO SPECIAL PAINTS FOR SPECIAL PURPOSES

THE PIERCE & RICE OIL COMPANY

TEL 1195 — CANTERBURY, COR. HAMMOND STREET, WORCESTER

Hand Stripping Cards

German and Domestic Heddles for Cotton and Woolen Mills

Revolving Top Flats remounted Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

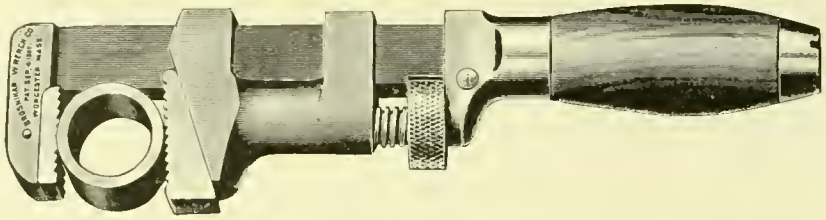
HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Look at the Wedge-Shaped Jaw



¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the upward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp*.

¶All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

A One Hand Telephone Index

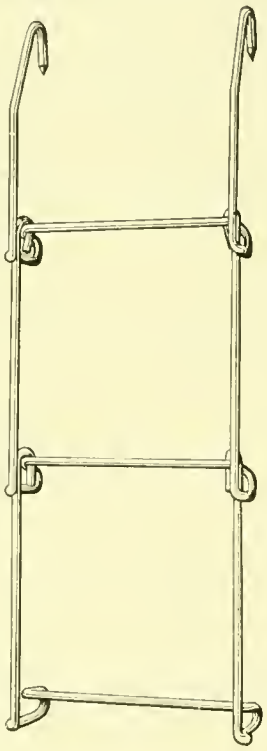
GET ONE

You have now an opportunity to possess a handy Index in small compass, that can be operated with one hand. The arrangement of frequent calls will please you. Telephone 1269 and agent will call and show sample.

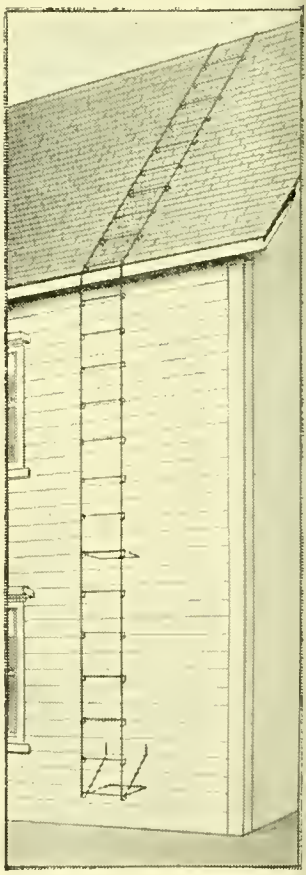
NEW ENGLAND TELEPHONE INDEX CO.

1013 Slater Building, Worcester, Mass.

WILL NOT BURN **WILL NOT ROT**



The Ladder That Saves Time and Money



Its 1-Foot Sections give any length for Fire Escapes and general use

MADE IN WORCESTER

THE ACME STEEL LADDER CO.

56 Hermon Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ROYAL WORCESTER
CORSETS

Adjusto Style 608
Price $3

EVERY ROYAL WORCESTER Corset is an original conception designed upon correct lines, fashioned from the best materials with painstaking care by skilled workpeople, and emanates from one of the largest and most perfectly equipped corset plants in the world.

Unmistakably the ROYAL WORCESTER is the greatest corset value at a medium price. Anyone can well afford to buy and wear the ROYAL WORCESTER—it is the one sure way to solve all corset troubles.

Invariably, women who once wear

ROYAL WORCESTER CORSETS

become enthusiastic devotees to their favorite style and could not be induced to wear another kind.

Don't invest in a new gown until you procure a ROYAL WORCESTER over which to fit it. The diversity of styles and varying heights and lengths will enable you to do this with ease, and you will enjoy the utmost in style, fit, comfort and service.

Our assortment is complete, including all the new 1910 models. Coutil or batiste.

PRICES $1 TO $3

Style 633
Price $2.50

Model 906
Price $5

Style 504
Price $1.50

Also sole Worcester agents for BON TON Corsets, $3 to $15, and ADJUSTO Corsets, $3 and $5

BOSTON STORE
Denholm & McKay Co.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE VACATION SEASON is at hand. No dwelling house or ordinary safe offers any real security against loss by fire or burglary. This is a good time to secure absolute protection and freedom from anxiety by enlisting the services of the Worcester Safe Deposit Vaults.

Valuables in trunks and boxes are entirely safe and free from corrosion in our vaults. This Company will call for trunks or other large cases, receipt for them at the house, and convey them to the vaults, where they will be registered and certificates of deposit forwarded by mail.

Entrance at the Left of Grand Stairway on the Street Floor

Worcester Safe Deposit Vaults (Incorporated)

WILLIAM D. LUEY
President

JOHN H. COES
Secretary

HALLECK BARTLETT
Treasurer

OFFICE HOURS
Daily from 9 A. M. to 4 P. M., except on Saturday
Saturday from 9 A. M. to 1 P. M.

State Mutual Building

340 Main Street Worcester, Mass.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street Opposite City Hall

If Business is Poor

You need us to brace it up.

If Fair

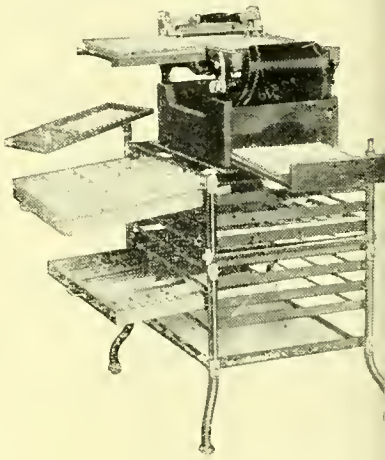
We can help you to make it better.

If First Rate

We can keep it so.

By our

WRITER-PRESS



THE WRITERPRESS

method of giving you exact copies of your typewritten letters, we are in shape to take RUSH orders, do them thoroughly, neatly and QUICKLY. We have type enough and forms enough to start and finish your work, right off, if you want it. Try us.

Post Cards

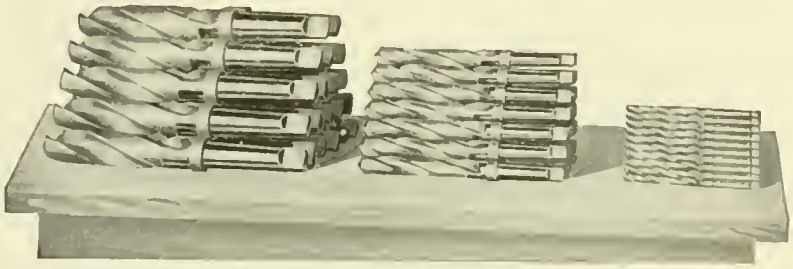
If your dealer has not some special post card you want, try us. We wholesale post cards to the trade, and have in stock all the time thousands of different cards, ranging in selling prices from 4 for 1c, 2 for 1c, 1c each, up to 10c, 25c, 50c and $1.00 each. Come and see our cards at No. 5 Green Lane, Worcester.

THE JONES SUPPLY CO.

Tel. 3364-3 Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

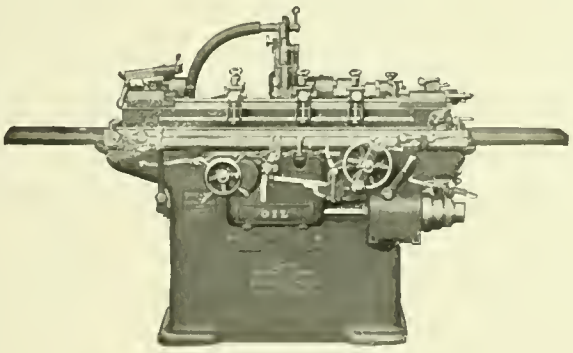
A True Story About Twist Drills



A TWIST DRILL WORKS had been grinding their Drills for several years, and had a large number of Grinding Machines. They required more machines and asked us what production we could guarantee. Our GUARANTEE was considered TOO LARGE to be taken seriously. In fact, it was considered so absurd that it was with difficulty that we obtained their consent to demonstrate in their works.

WE DEMONSTRATED

WE MADE GOOD



Front view, 6x32 machine.

RESULT:

8 Machines Ordered

AGENTS

Vonnegut Hardware Co., Indianapolis.
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta.
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.
Motch & Merryweather Mchy. Co., Cleveland, Detroit and Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver
Henshaw, Bulkley & Co., San Francisco, Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan.

97 N

Norton Grinding Co.

WORCESTER, MASS.

CHICAGO STORE: 11 North Jefferson Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.

Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU'RE ON THE RIGHT TRACK!

LOOK FOR "THE SEMAPHORE"

INDICATES "THE RIGHT OF WAY"

WHEN YOUR MIND IS MADE UP, PLACE ORDERS FOR PRINTING PLATES WITH

OUR CREATIVE AND PHOTO-ENGRAVING DEPARTMENTS ARE AT YOUR SERVICE

CARLTON ENGRAVING CO.

Tel. 4550 418 MAIN STREET

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars

Ferrules and Sheet Metal Specialties

Case Hardening

Nickel, Copper and Brass Plating

also Japanning

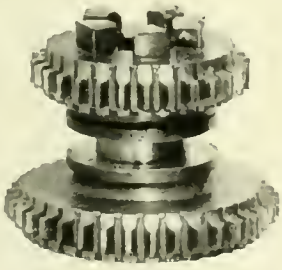
MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

AUTOGENOUS WELDING IN WORCESTER

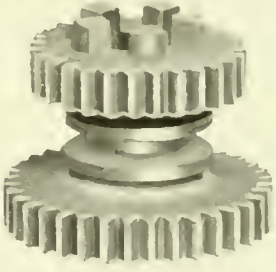
Any broken parts in your machine may now be made



Transmission Sliding Gear
Before Welding

As good as new by

D. A. Baldwin & Co.



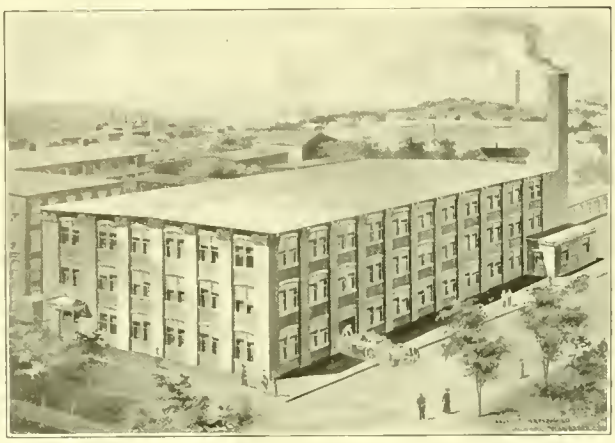
Same Gear
After Welding

COMMONWEALTH MOTOR MART, 22 COMMERCIAL ST.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.



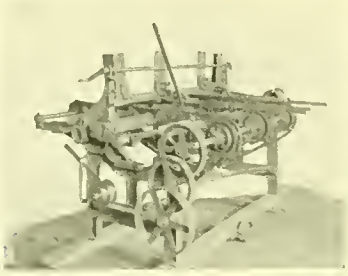
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



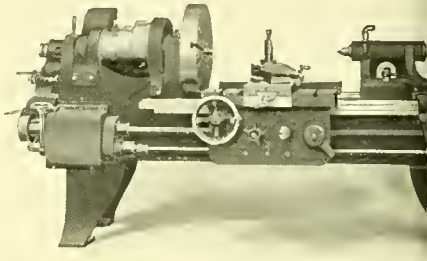
COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
506 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

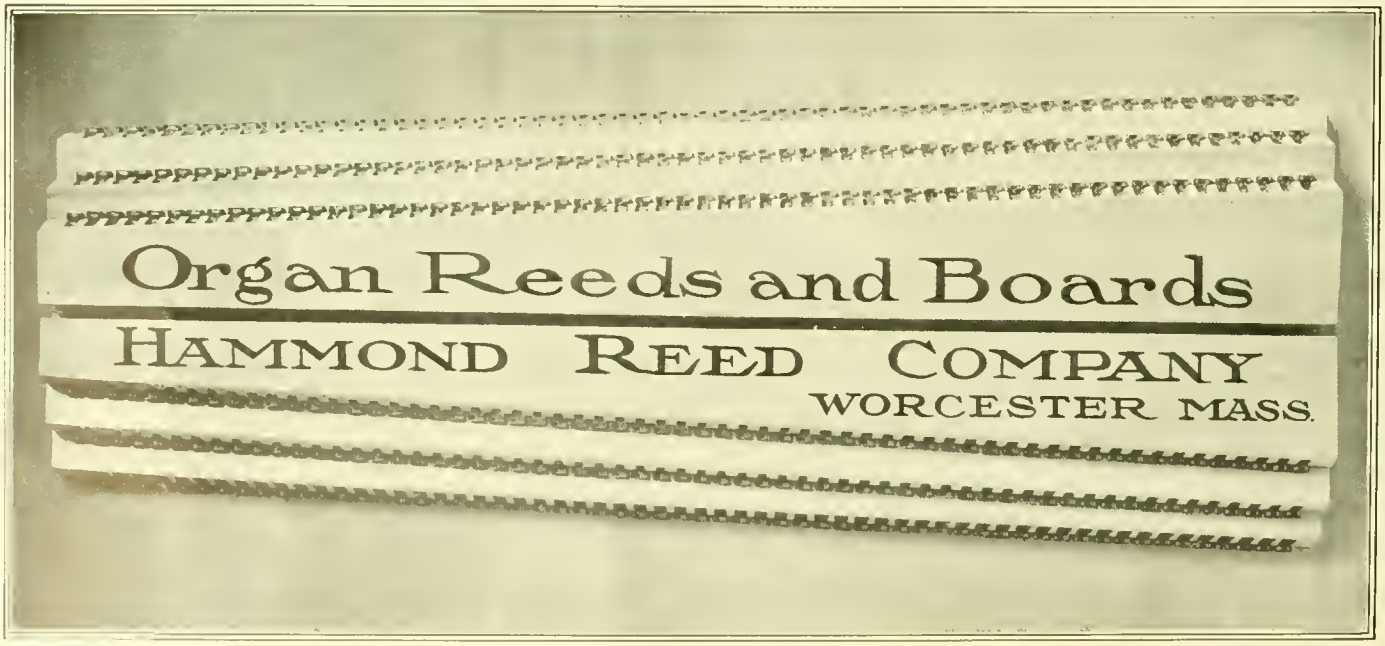


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all description

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

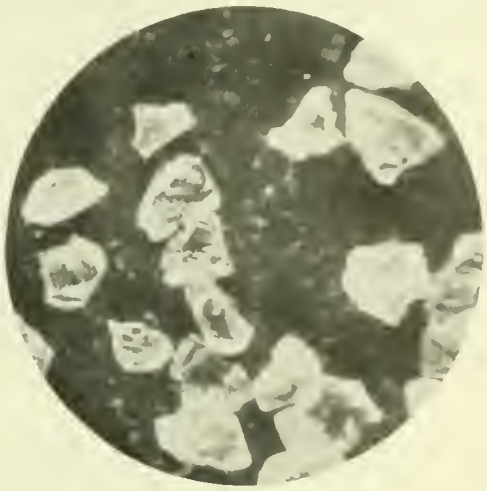


Fig. 1—Alundum

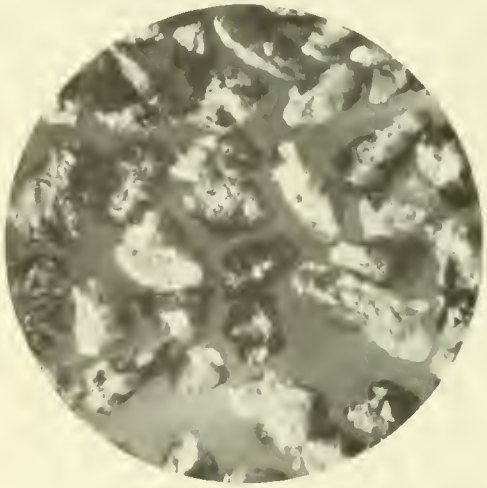


Fig. 2—Emery

Grinding Wheel Grits

Figure 1 is a micro-photograph of grain Alundum, the "grit" used in the manufacture of Norton Grinding Wheels. Alundum runs 92 per cent. to 98 per cent. Crystalline Alumina.

Figure 2 is a micro-photograph of Naxos Emery grain—50 per cent. Crystalline Alumina.

The purity and structure are plainly shown under the microscope. Note also the shape of grain.

In all aluminous abrasives, the abrasive efficiency is directly proportional to the amount of Crystalline Alumina present.

There are good reasons for the superior cutting qualities of Norton Grinding Wheels made of Alundum.

Alundum is manufactured in Norton Company's Electric Furnace Plant at Niagara Falls, N. Y.

New York
Chicago
Niagara Falls

Norton Company

Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

OUR KODAK GIRL

Evinces her satisfaction not only with her

CAMERA

which she bought of us, but also with her

PICTURES

which we develop and print for her. So would YOU.

Drop in and get her picture on a Post Card.

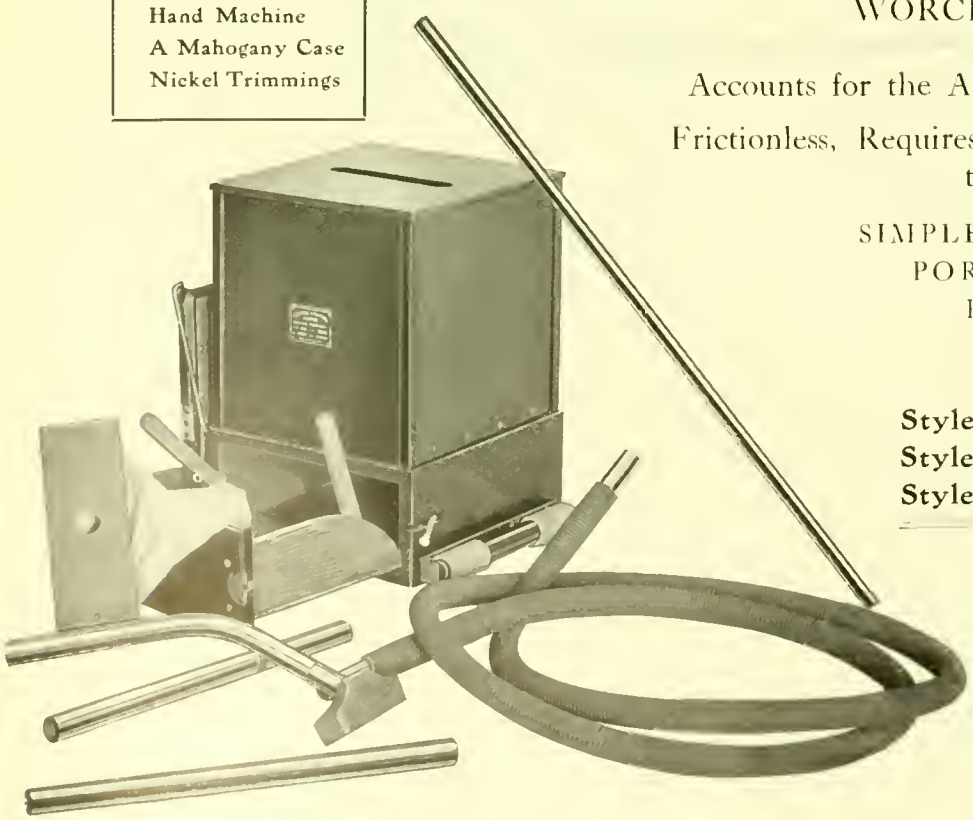
WHEATON & BOWERS

PHOTO DEPARTMENT
366 MAIN STREET, WORCESTER
PHONE 2128

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.

Manufacturers
Worcester

Pneuvac Company

Blake Building
Boston, Mass.

ESTABLISHED 1829

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

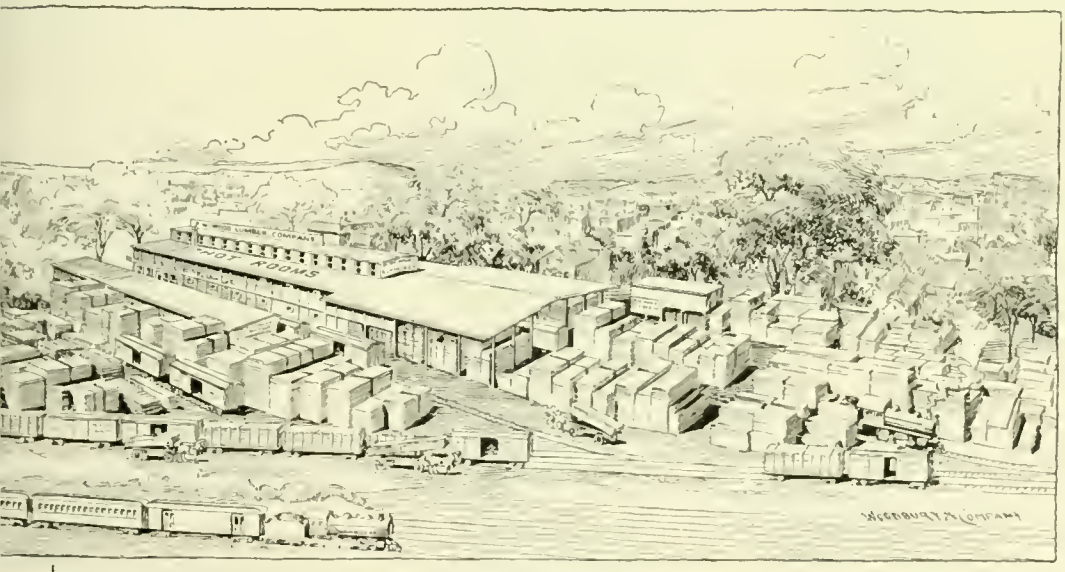
GEO·F·BLAKE·JR·&Co

WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS



LUMBER
FOR
Building
and
Shop Work

TELEPHONE
3095

P. W. WOOD LUMBER COMPANY,

11 Garden Street
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*
Iroquois Bohemian Lager, *Frank Jones' Golden Ale*

and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street
Telephone 2455 *Worcester, Mass.*

WIRING A HOUSE

so that its surroundings are perfectly safe requires a thorough knowledge of the business.

GOOD ELECTRICAL WIRING

means immunity from fire and lower rates of insurance.

That is why our work is always cheap. It's safe, and there is no cause for worry after the work is done. Get us. It's safest and cheaper as well. See us for repairs.

W. D. KENDALL COMPANY

TELEPHONE 5723 268 Main Street

MODELING
WOOD CARVING

Models for Wood, Stone, Metal, Plaster, Cement

Architectural and Decorative Ornaments in Plaster, Papier-Maché and Composition

L. C. Hamill

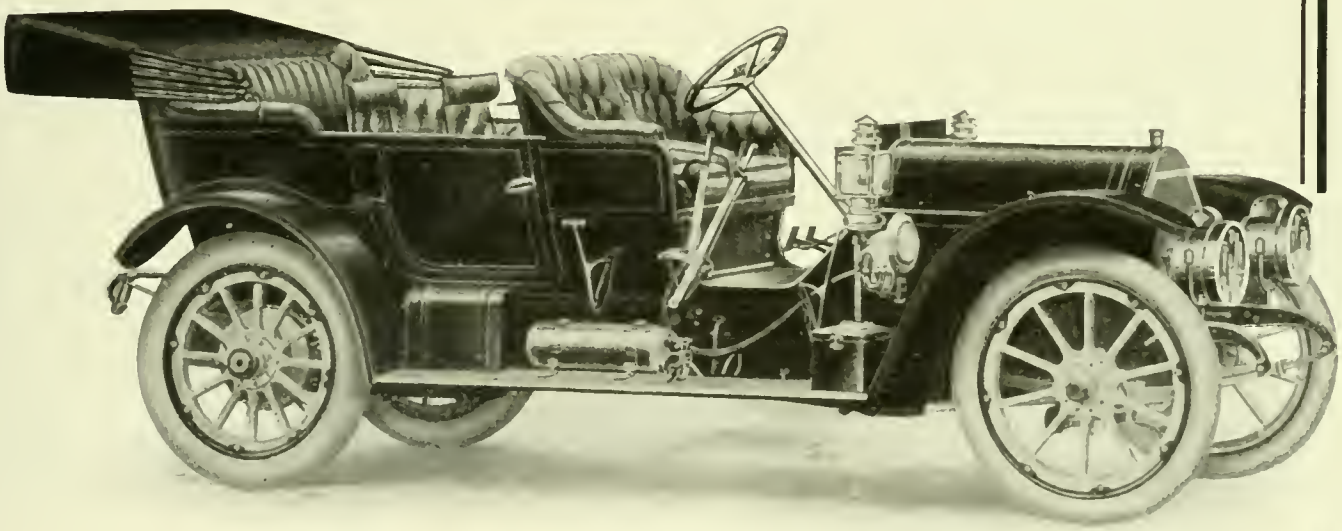
94 Commercial Street
Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

What the Stearns did at Dead Horse Hill

Our 15-30 H.P. Five-Passenger Touring Car driven by R. H. Higgins, his first race, and carrying four passengers averaging 140 pounds, negotiated Dead Horse Hill in 1 min. 53 sec., at Hill Climb, June 4th, 1910



30-60 H. P. SEVEN-PASSENGER TOURING CAR

Standard type of touring car — Removable tonneau seats — Either shaft or chain drive

R. H. HIGGINS COMPANY

96 Commercial Street, Worcester, Massachusetts

PHONE 21-1

Demonstrations upon request

ALL STEARNS CARS ARE EQUIPPED WITH CONTINENTAL TIRES AND DEMOUNTABLE RIMS

THE WHITE LINE RADIATOR BELONGS TO THE STEARNS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

Opposite City Hall Park

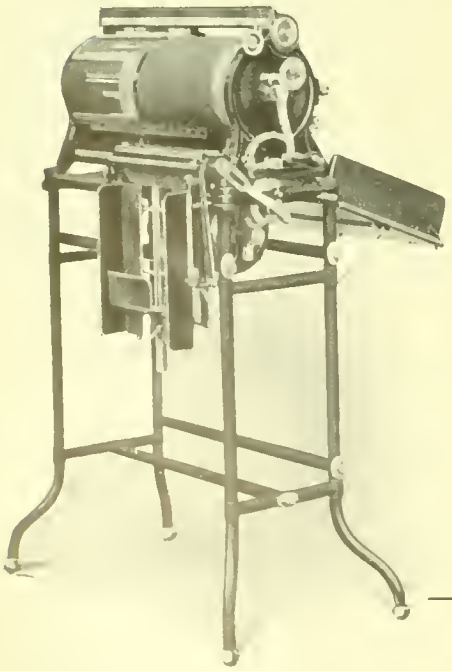
New Park Hotel

Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager



MULTIGRAPHING. THIS IS THE MACHINE UPON WHICH WE PRINT *FORM LETTERS*, FOR FOLLOW-UP PURPOSES. LET ME SEND YOU PRICES

ADDRESSING. YOUR MAILING LIST CAN BE SET UP ON OUR *ADDRESSOGRAPH*, SAVING TIME AND MONEY. PRICES ON APPLICATION

EXPERT TYPEWRITING A SPECIALTY

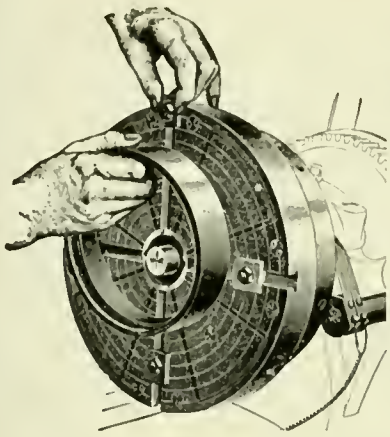
WORCESTER MAILING CO.

GRACE L. BELKNAP,
Proprietor

Room 704 State Mutual Bldg.

TELEPHONE 3480 WORCESTER

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

BABY CARRIAGE
BICYCLE
CARRIAGE
MOTORCYCLE
AUTOMOBILE

TIRES

PRICES RIGHT

24 AUSTIN ST., WORCESTER TEL. 6239-2

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

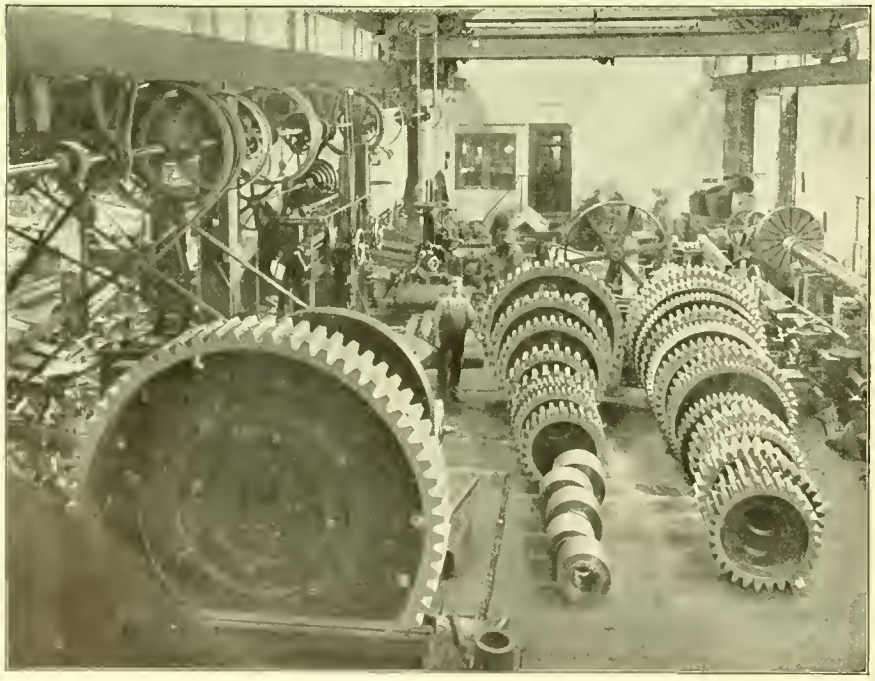
Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

F. P. SHELDON & SONS, Engineers — Weave Shed, 300′ x 300′ — ERWIN COTTON MILLS



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

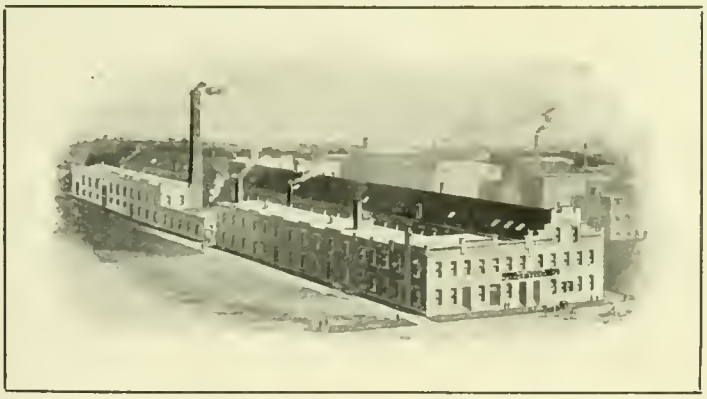
WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

DURHAM, NORTH CAROLINA Bleachery, 253′ x 128′

FISKE-CARTER CONSTRUCTION CO., Builders
Worcester, Mass.



Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Acme Ladder Company, xx
Adams & Powers, doors, sash and blinds, xxxiii
Alsten & Goulding, auto supplies, xvii
American Car Sprinkler Co., car sprinklers, v
Blake, Jr., & Co., George F., iron and steel, and supplies, xxix
Blanchard & Co., F. S., printers, Back cover
Boston & Worcester Railway, xvi
Brosnihan Wrench Co., xx
Brownell, George L., twisting and spinning machinery xxxvi
Buck & Co., E. A., oils and gasoline, xviii
Carlton Engraving Co., xxiv
Carr Co., George W., granolithic and concrete work, xv
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, ii
Commonwealth Motor Mart, xxv
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, xxvi
DeLong, W. H., dental disks, xxxiii
Eddy Company, viii
Fiske Carter Co., general contractors, xxxv-xxxvi
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxvi
Hamill, L. C., xxx
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxx
Heywood Boot & Shoe Co., fine shoes, ii
Higgins Co., R. H., Stearns Cars, xxxi
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xix
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xxxiii
Jones Supply Co., Writerpress, xxii
Jackson St. Foundry, iron castings, xxv
Kidder, R. E., drawing tables, v
Kingston, John P., architect, xiv
Kendall, W. D. Co., electricians, xxx
Luce, E. B., commercial photographer, xxvi
Morgan Construction Co., rolling mill equipment, xxxiv
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxv
Multiple Woven Hose & Rubber Co., fire hose and belting xxxvi
New England Anchor Fence Co., ii
New England Audit Co., xii
N. E. Motor Supply Co., xxxiii
N. E. Telephone Index Co., xx
New Park Hotel, xxxii
Norcross Brothers Co., contractors and builders, iv
Norton Company, grinding wheels, xxvii
Norton Grinding Co., grinding machines, xxiii
O'Connell Real Estate Co., xii-xiii
People's Savings Bank, x
Pierce & Rice Oil Co., paints, oils and gasoline, xix
Pond Machine & Foundry Co., xxv
Powers Company, F. E., coal, xxiv
Pratt & Inman, iron and steel, xxix
Prentice Bros. Company, drilling machines, engine lathes i
Provident Life & Trust Co., xii
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Robbins Machine Co., lathes, xii
Royal Worcester Corset Co., xxi
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxv
Standard Mfg. Co., vii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, x
Snyder & Son, J. E., upright drills, i
United States Envelope Co., iii
Union Water Meter Co., water meters,
Walker & Co., O. S., chucks, xxxiii
Warren Hotel, The, xxxii
Warren, J. F. & W. H., leather belting and mill supplies xxvi
Wheaton & Bowers, photo supplies, xxviii
Wheelock Fence Company, viii
Whitcomb-Blaisdell Machine Tool Co., lathes and planers, Back cover
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxxvi
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xxxv
Wire Goods Co., wire hardware, back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xxviii
Wood Lumber Co., P. W., xxix
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xxii
Worcester Machine Screw Co., set, cap and machine screws, xxxv
Worcester Mailing Company, xxxii
Worcester National Bank, iv
Worcester Safe Deposit Vaults, xxii
Wright Co., M. S., vacuum cleaners, xxviii
Wright Wire Co., wire and wire cloth, wire rope, etc. iv
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.

"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

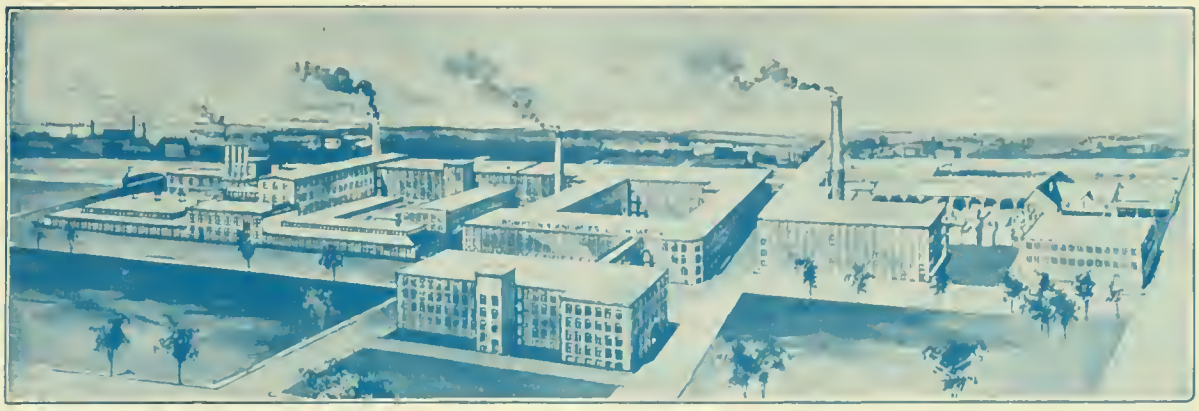
SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC



WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

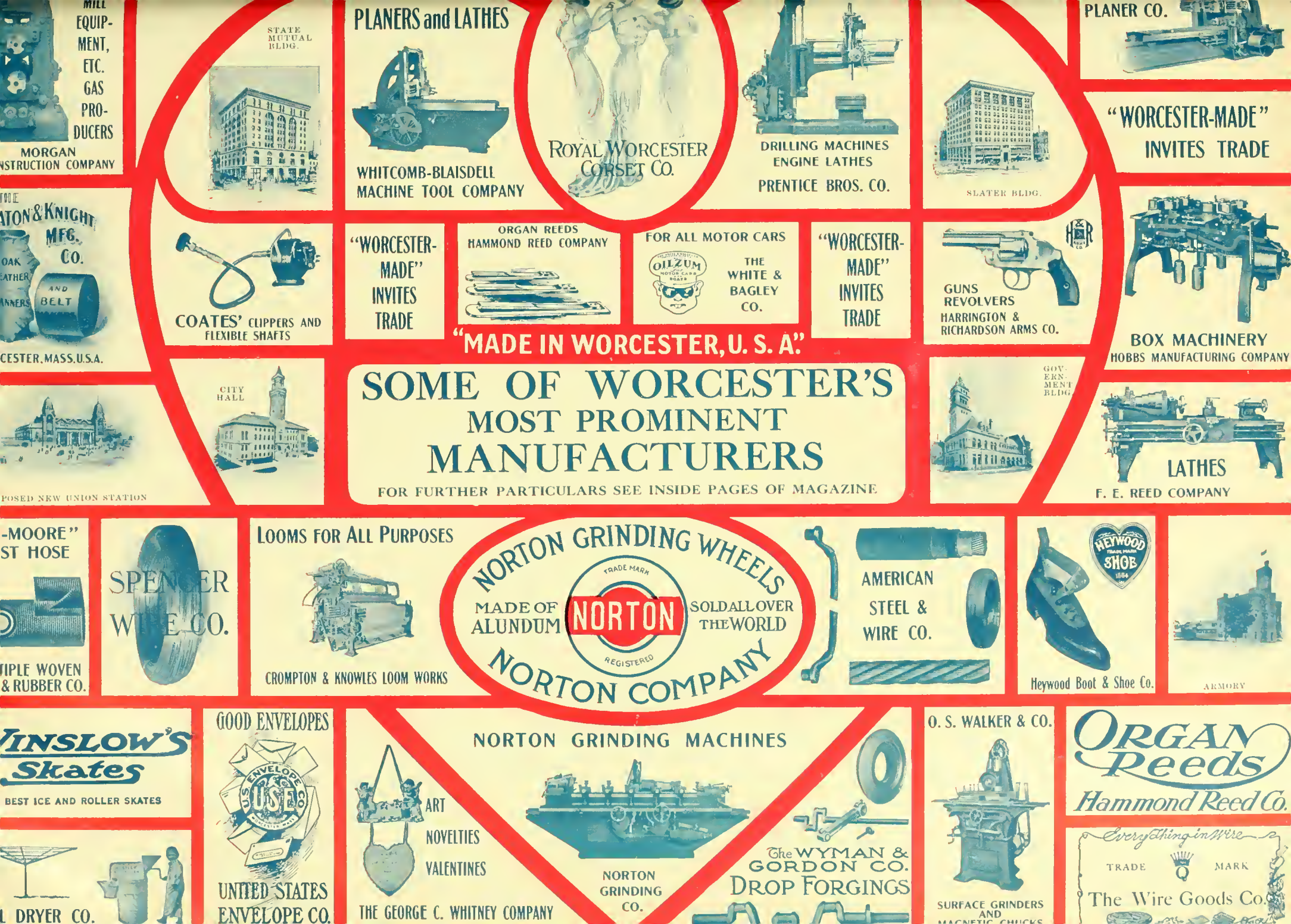
CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

Are you Buying Price--or Printing?

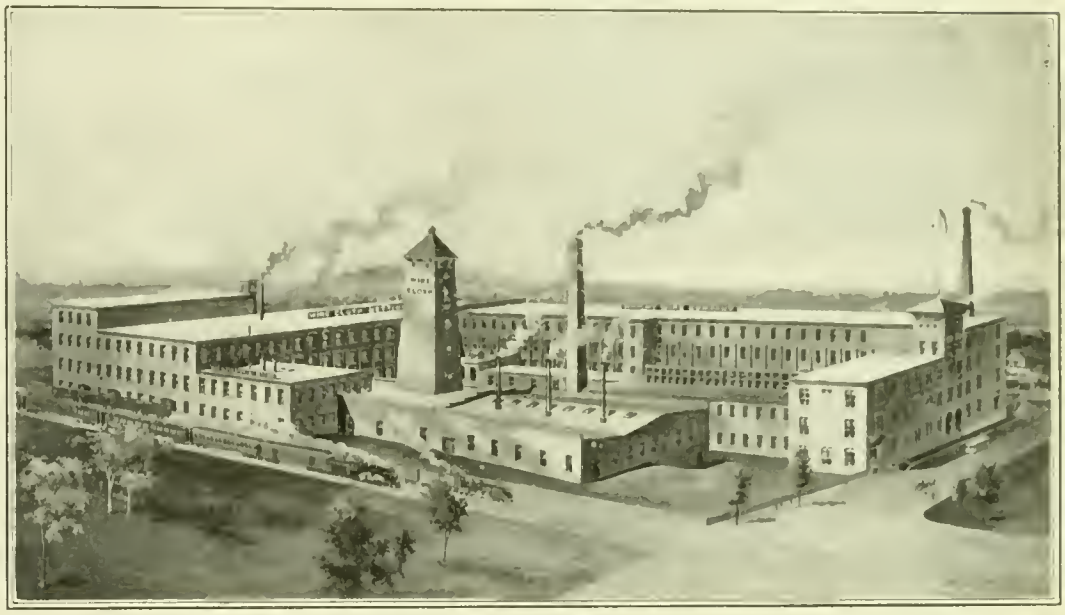
THERE are as many price quotations on printing as there are keys on a piano—some high, some low. Strike any price and you get back a corresponding class of work. It's the inexperienced performer who reaches for the low keys and then expects to get printing up in high C. If you give first consideration to price, we doubt our ability to please you. If you want printing that is a credit to you—and to us—and realize that good work must be fairly remunerated, then we want your business and you want the services of the Blanchard Press. Let's get together on your next order.

F. S. Blanchard & Co., 6 Walnut Street, Worcester, Mass.


MILL EQUIPMENT, ETC. GAS PRODUCERS
MORGAN NSTRUCTION COMPANY
STATE MUTUAL BLDG.
PLANERS and LATHES
WHITCOMB-BLAISDELL MACHINE TOOL COMPANY
ROYAL WORCESTER CORSET CO.
DRILLING MACHINES ENGINE LATHES
PRENTICE BROS. CO.
SLATER BLDG.
PLANER CO.
"WORCESTER-MADE" INVITES TRADE
ATON & KNIGHT MFG. CO.
OAK ATHER ANNERS
AND BELT
CESTER, MASS. U.S.A.
COATES' CLIPPERS AND FLEXIBLE SHAFTS
"WORCESTER-MADE" INVITES TRADE
ORGAN REEDS HAMMOND REED COMPANY
FOR ALL MOTOR CARS
OILZUM
THE WHITE & BAGLEY CO.
"WORCESTER-MADE" INVITES TRADE
GUNS REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.
BOX MACHINERY
HOBBS MANUFACTURING COMPANY
"MADE IN WORCESTER, U. S. A."
POSED NEW UNION STATION
CITY HALL
SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS
FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE
GOVERNMENT BLDG.
LATHES
F. E. REED COMPANY
-MOORE" ST HOSE
IPLE WOVEN & RUBBER CO.
SPENCER WIRE CO.
LOOMS FOR ALL PURPOSES
CROMPTON & KNOWLES LOOM WORKS
NORTON GRINDING WHEELS
MADE OF ALUNDUM
TRADE MARK
NORTON
REGISTERED
SOLD ALL OVER THE WORLD
NORTON COMPANY
AMERICAN STEEL & WIRE CO.
HEYWOOD SHOE
Heywood Boot & Shoe Co.
ARMORY
VINSLOW'S Skates
BEST ICE AND ROLLER SKATES
GOOD ENVELOPES
U.S. ENVELOPE CO.
UNITED STATES ENVELOPE CO.
NORTON GRINDING MACHINES
ART
NOVELTIES
VALENTINES
THE GEORGE C. WHITNEY COMPANY
NORTON GRINDING CO.
The WYMAN & GORDON CO.
DROP FORGINGS
O. S. WALKER & CO.
SURFACE GRINDERS AND MAGNETIC CHUCKS
ORGAN Reeds
Hammond Reed Co.
Everything in Wire
TRADE MARK
The Wire Goods Co.
L DRYER CO.

WIRE

Wire Cloth
Picture Cord
Coal and Sand
Screens
Foundry Riddles
Wire Rope and Cable
Poultry Netting
Elevator Cabs
and Enclosures
Flower Bed Guard
Trellis and
Ornamental Fencing

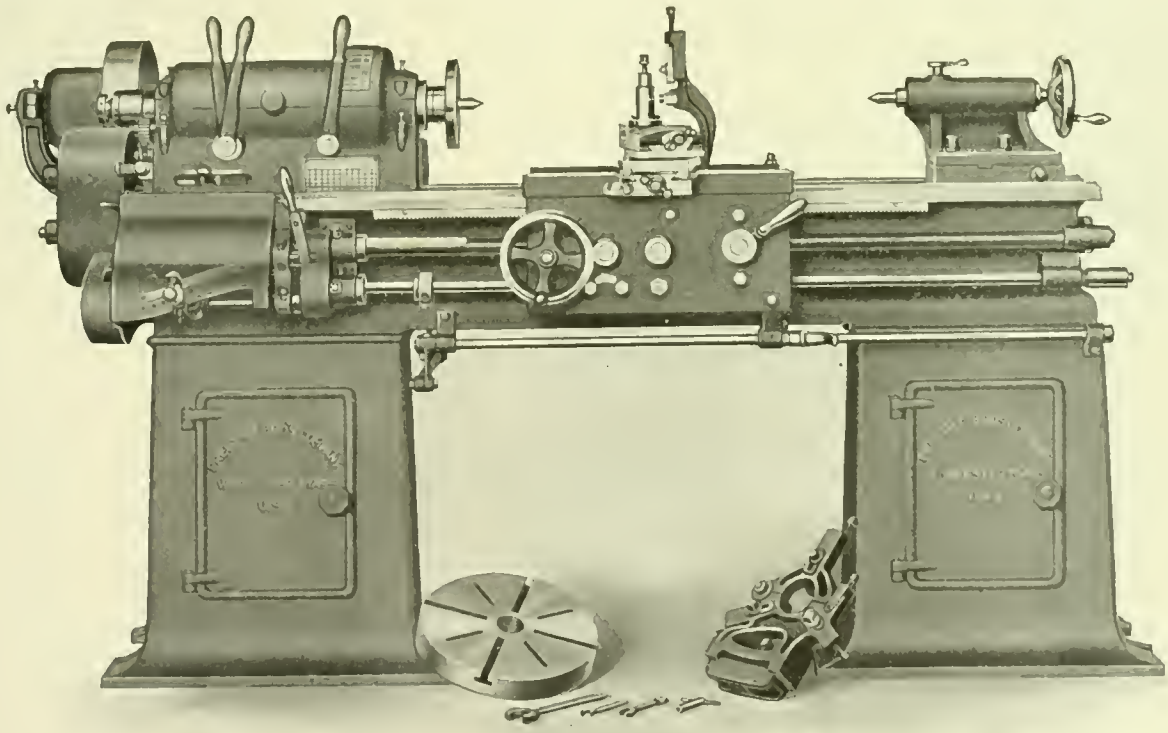


WORCESTER FACTORY

WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

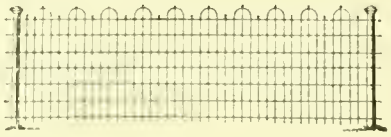
Upright and Radial Drilling Machines and Engine Lathes

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

Your Catalog

¶ Just a word about that catalog of yours.

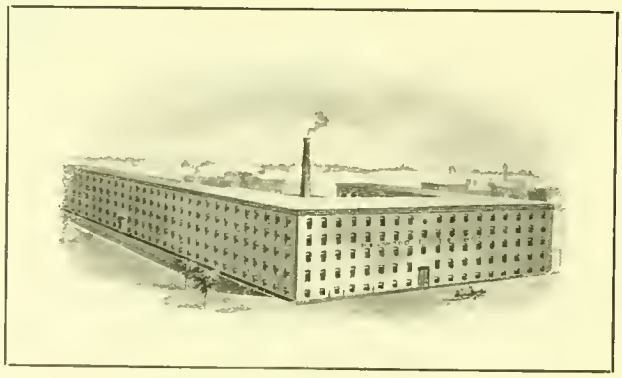
¶ If it is intended to act as a salesman and sell your goods, why not have it attractive and clothed in proper form? Successful houses do not send out their representatives clad in overalls and jumpers.

¶ We have the equipment and "know-how" to take your copy, arrange it in proper form, select the right kind of type, paper, ink and cover and blend them into one harmonious whole, which, when finished, will give it that exclusive character known as **"style."** We are constantly doing it for the most fastidious buyers in New England. We can do it for you. We don't have to tell you what we **will** do, but can show you what we **have** done.

The Commonwealth Press

Oliver B. Wood

50 Foster St., Worcester, Mass.



High Grade Shoes for Men

Factory and Main Office

70 Winter St., Worcester, Mass.

New York Office

127 Duane St., New York City

Retail Store

415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer

Buenes Aires, Argentine Republic

Patterson & Ruhfus

Melhourne and Sydney, Australia

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE NORCROSS BROTHERS COMPANY

Contractors and Builders

NEW YORK BOSTON PROVIDENCE WASHINGTON

WORCESTER

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910, $34,681,951.04
Liabilities, Jan. 1, 1910, $31,584,938.72
Surplus, Jan. 1, 1910, $3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

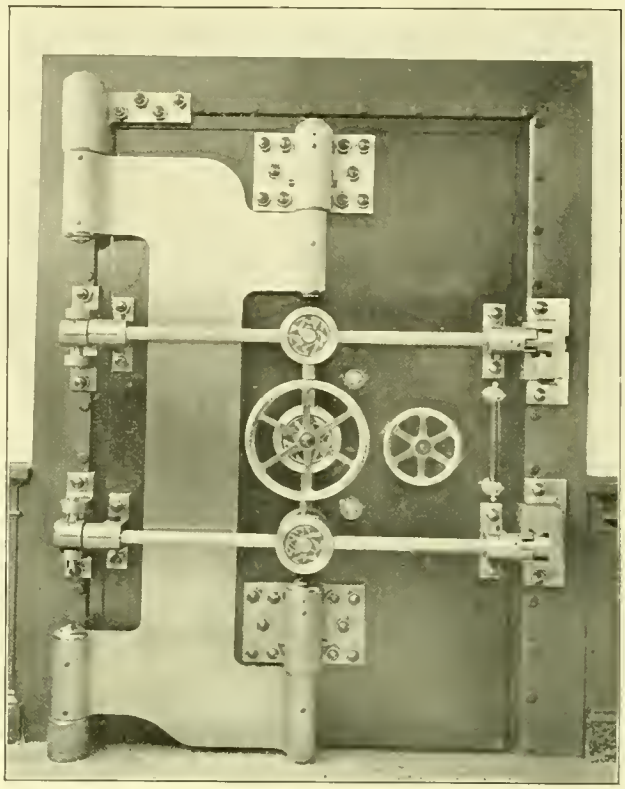
Worcester
Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Vacation Period

Anxiety concerning the safety of valuable papers, jewelry, silver-plate and other articles may be avoided by renting a safe-deposit box in our fire and burglar proof vaults at $4 per annum.

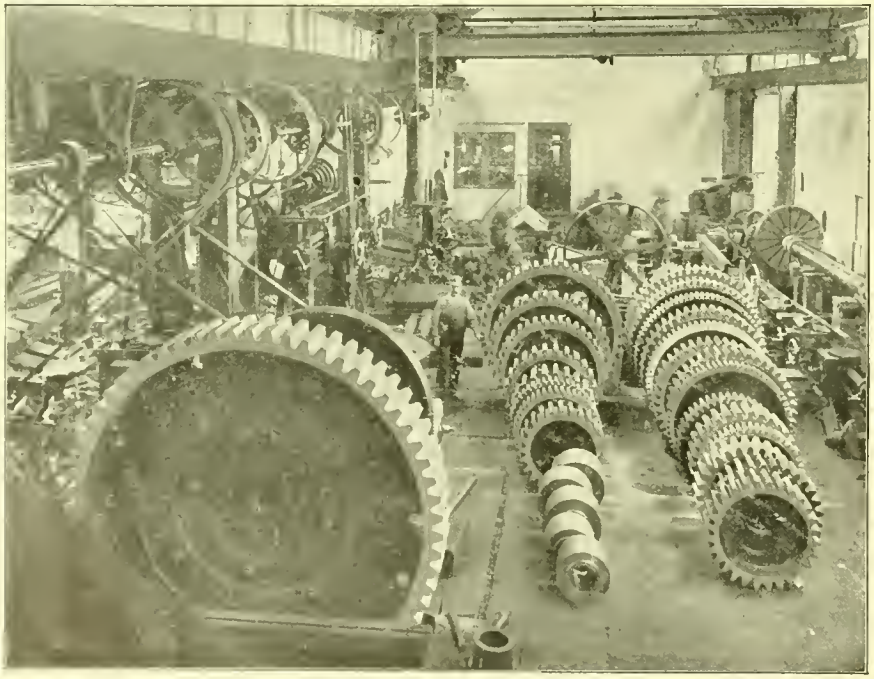
VALUABLE PACKAGES may be stored in our storage vaults for a small monthly charge.



Worcester National Bank

FOUNDED 1804

JAMES P. HAMILTON, *President* S. D. SPURR, *Cashier* F. M. HEDDEN, *Assistant Cashier*



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

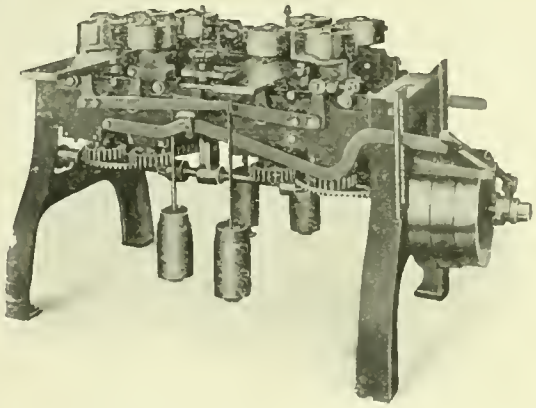
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANION SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST

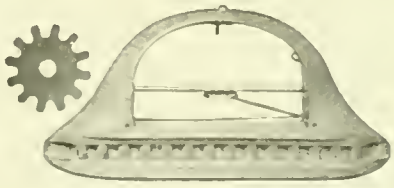
AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Shuttles for Narrow Fabric Looms

We are now prepared to make all kinds of shuttles for narrow fabric looms. Send sample and let me quote you a price. First class work guaranteed.



R. E. KIDDER

13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

WORCESTER

THE PIONEER CITY OF AMERICA FOR MACHINE-MADE ENVELOPES STILL SETTING THE STANDARD FOR THE COUNTRY.

MORE ENVELOPES ARE MANUFACTURED IN WORCESTER THAN IN ANY OTHER CITY IN THE WORLD.

LOGAN, SWIFT & BRIGHAM DIVISION
Approximately 170,580 Square Feet of Floor Space

WORCESTER PLANTS

OF

The United States Envelope Co.

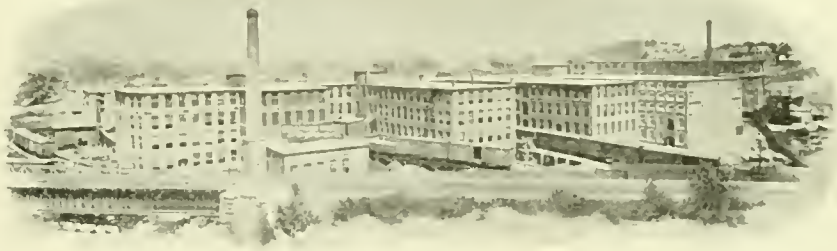
THE LARGEST ENVELOPE MANUFACTURER IN THE WORLD, MANUFACTURING ALL SIZES AND GRADES OF ENVELOPES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.



REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

PRICE PER PAIR, 50 CENTS

If your dealer cannot furnish, write to

Standard Manufacturing Company

186 Union Street, Worcester, Mass., U.S.A.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

1851 G&K 1910

TRADE MARK
REG. U S. PAT. OFF.

THE fifty-nine years between 1851 and 1910 are appropriately bridged by the "G. & K." trade mark. This trade mark is the embodiment of fifty-nine successful years' experience as belt makers, forty-three of which we have been tanners also. It represents the growth of a business which in the sixties was practically unknown outside of Worcester, and which to-day has an established reputation in every State in the Union as well as in Canada, Mexico, Europe and other foreign countries. It represents the growth of an idea into an accepted fact, that it pays, and pays handsomely, to use belting especially adapted to the conditions under which it has to run, regardless of first cost. It represents the "square deal" as between the dealer, consumer and manufacturer. It represents the highest standard of quality.

Look for these trade marks; they are stamped every ten feet on the belting which we produce

Leather belting and other G. & K. products, such as lace leather, leather packings, belt dressings, belt cement, are carried in stock by dealers and supply houses located in the principal manufacturing centers; each of our branches mentioned below also carries a complete stock.

THE GRATON & KNIGHT MFG. CO., Oak Leather Tanners and Belt Makers, Worcester, Mass.

BRANCHES: Atlanta, Ga.; Boston, Mass.; Chicago, Ill.; Milwaukee, Wis.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Pa.; Portland, Ore ; San Francisco, Cal.; Seattle, Wash.; St. Louis, Mo.

Our Guarantee

The Eddy Gives a Keen Edge

We place behind every strop sent out the strongest kind of guarantee, and no matter where the strop bearing our name and trade mark may be purchased, we stand ready to make good if by any reason of defect in either material or workmanship it proves unsatisfactory.

THE EDDY COMPANY

42 Southbridge St.

Worcester, Massachusetts

Made in Worcester.

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The One Residential Center of Interest and Activity in Worcester is

Ten minutes from City Hall

LENOX

On Pleasant Street, opp. Richmond Heights

The Homesite Beautiful

Men at work on LENOX improvements

Where Discriminating Homeseekers are Buying

Because LENOX homesites are Nature's "beauty spot of Worcester," accessible, healthy and in the best neighborhood in the city. The only homesites where over $60,000 are being expended in the finest development work ever undertaken in Worcester building sites. Large lots, wide streets, parkways, granolithic walks, handsome entrance feature, water, sewers, gas, electric lights, every city improvement, proper restrictions.

Where Shrewd Investors are Buying

Because the LENOX opportunity means "a million-dollar development in Worcester realty." No homesites in this city compare in present or future value with those at LENOX, where homeseekers and investors are buying THE BEST AT THE PRICE OF THE ORDINARY.

You say—and will ALWAYS say—"Good Morning" to good neighbors at LENOX, where values are increasing more rapidly than in any other residential section in the city.

Representatives at LENOX daily and Sundays to show you the property. Call or send for plans, prices and our booklet entitled "The Beauty Spot of Worcester."

THE O'CONNELL REAL ESTATE COMPANY

Members Massachusetts Real Estate Exchange

Executive Offices corner Main and Pleasant Streets

Telephone 2088

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MOTOR CAR ACCESSORIES

HEADQUARTERS FOR TIRES
VULCANIZING

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building

Worcester — Stete Mutuel Building

Prospectus contelning one hundred references mailed upon request.

Automobilists—Listen!

"HIGHEST QUALITY" CYLINDER OILS *are just what the name implies.*

The Finest Pennsylvania Motor Oils. Highest flash and fire test. Free from carbon, perfect lubricants.

"HIGHEST QUALITY" Light, Medium and Heavy Oils for Gas Cars.

"HIGHEST QUALITY" COMPOUNDED SUPER-HEATED OIL for Steam Cars.

"LET US PROVE IT"

Let us show you the tests on our oils, also on any sample you may wish to know about. We'll gladly give you any quantity of "Highest Quality" Oils for trial, and there'll be no charge if you're not more than satisfied.

A. G. GUY COMPANY

(ALBERT G. GUY) Formerly with Oilzum

102 COMMERCIAL STREET WORCESTER, MASS.

Telephone 5250

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

PHOTO BY SEARS

VIEW FROM TRACT LOOKING NORTH

ADVANCE IN PRICE OF LOTS AT GREEN HILL

AUGUST 1, 1910

After that you pay someone a profit, or, if you are wise, someone pays a profit to you

ELECTRIC LIGHTS
CITY WATER
GRANOLITHIC WALKS
CITY GRADE STREETS
FIVE-CENT FARE

ADJOINS GREEN HILL PARK
BEAUTIFUL VIEWS
HEALTHY LOCATION
GOOD DRAINAGE
NO FACTORY SMOKE

Improvements made and provided for, and houses built, under construction and contemplated, are such that the price of the remaining unsold lots on and after August 1st will be advanced 25 per cent., consequently lots now selling at 6 cents per foot will then cost 7½ cents, and a few choice lots, facing the PARK, now selling at 8 cents per foot, will then cost 10 cents.

Lots now costing $200 will then cost $250

REMEMBER, THIS ADVANCE TAKES PLACE AUGUST 1ST

Lots now costing $400 will then cost $500

We want everyone to have a chance to own a home in the best section of the city—we want to make it to your interest to go out. We pay your fare and a liberal day's wages besides to get you there. If you read this advertisement, cut it out and tuck it in your pocket—it won't take a minute, and it's as good as TEN DOLLARS in GOLD to you. Come out and make an early selection.

Home-seekers desiring to avail themselves of this exceptional opportunity can make use of this advertisement as a first payment coupon, as the company will accept the same as a first payment of ten dollars on a lot, therefore it costs you nothing to start a home now. This advertisement starts you and $5 per month keeps you going. What more can you ask? What other firm on earth gives you half as much?

Remember, you can get original prices but once, and these special during-development prices will positively be withdrawn August 1st. After that you pay someone a profit, or, if you are wise, someone pays a profit to you. We are offering to-day the best home-sites in the city of Worcester at lower prices than those far inferior. After your lot is paid for, we will build you a home, and allow you to pay for it as rent.

The Residential Balcony of Worcester

adjoins Green Hill Park, the largest and most attractive park in the city. Many desirable homes have been built here, more are under construction, still others are having plans drawn, and reasonable restrictions assure you that no other class of homes will be built here. All streets will be graded and sidewalked free of cost. We furnish you money to build, and allow you to pay same as rent. This tract is located on Lincoln St., just beyond Brittan Sq. You take the Lancaster or City Line car and get out at Marsh Av.—5-cent fare—14 minutes' ride. Salesmen on the tract every afternoon and all day Sunday.

LINCOLN REALTY COMPANY, 311 Main St., Worcester, Mass.

TELEPHONES 1014 or 2462-4

VIEW SHOWING NEW STREETS

PHOTO BY SEARS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE SMITH-GREEN CO.

R. C. Cleveland, *Pres. and Treas.*

The oldest and largest Wholesale and Retail Dealers in

BUILDERS' SUPPLIES

in Worcester County, selling to contractors, cities, owners and manufacturing companies

A few of our many specialties are:

- Cement
- Lime
- Plaster
- Drain Pipe
- Flue Lining
- Fire Brick
- Blanc Stainless Cement
- Terra Cotta Building and Partition Blocks
- Hydrated Lime
- Agricultural Lime

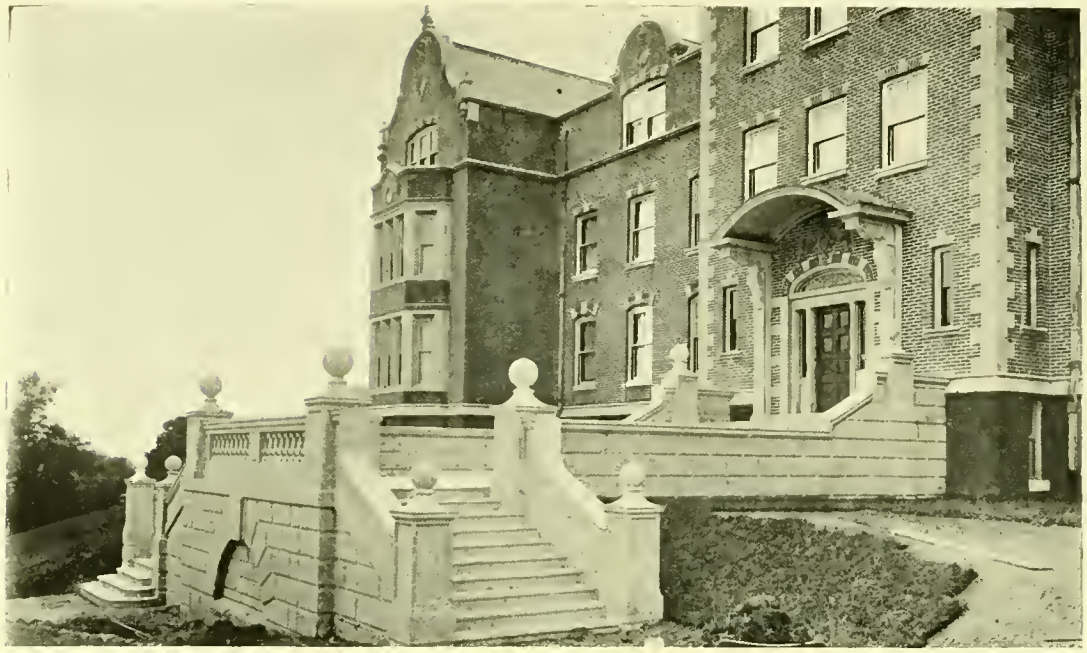
Proprietors of Elastic Pulp Plaster Mfg. Co., Manufacturers of Elastic Pulp Plaster—The Perfect Wall Plaster

Here is a partial list of the big work we are supplying this year:

City of Worcester, Cement	
City of Worcester, Lime for Purification Works	
City of Worcester, Sewer Pipe	
City of Lynn, Cement	
American Steel & Wire Co., New Plant	Corey, Alabama
Custom House	Boston, Mass.
Lancaster Mills	Clinton, Mass.
Leyden Congregational Church	Brookline, Mass.
Clark University Library	Worcester, Mass.
Whittall Mill	Worcester, Mass.
Telegram Newspaper Co., Buildings	Worcester, Mass.
Norton Co., Buildings	Worcester, Mass.
O. S. Walker & Co., Buildings	Worcester, Mass.
Granolithic Sidewalks, Lenox Property	Worcester, Mass.
Conduits, Worcester Electric Light Co.	Worcester, Mass.
Conduits, New England Tel. & Tel. Co.	Worcester, Mass.
Schoolhouses	Worcester, Mass.
Schoolhouse	Rochdale, Mass.
Parochial School	Clinton, Mass.
Parochial School	Webster, Mass.
Archambault Building	Centreville, R. I.
New Buildings, Whitin Machine Works	Whitinsville, Mass.
New Buildings, Paul Whitin Mfg. Co.	Northbridge, Mass.
Fisher Mfg. Co.	Fisherville, Mass.
Saco & Pettee Machine Works	Newton Upper Falls, Mass.
Warren Cotton Mills	West Warren, Mass.
Hamilton Woolen Co.	Southbridge, Mass.
Jewish School	Worcester, Mass.
W. W. Brown Factory	Worcester, Mass.

138 Franklin Street — Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Monolith Concrete Terrace. Hammered Finish.

We showed you last month an example of our work on a Steel Plant—not very ornamental. Here are proofs of our ability in construction, calling for unusual skill and ability.

THE GEORGE W. CARR COMPANY

ENGINEERS (H. C. WILSON) CONTRACTORS

518 Main Street, Worcester, Massachusetts

Monolith Concrete Statue, Base and Seats. Hammered Finish.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Buy

Portland Cement

Carey Roofing

Ivory Wall Plaster

Sackett Plaster Board

Face Brick Fire Brick

Metal Studding and Lath

Cheshire Lime

of

B. F. MARSH

22 Garden Street

Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

RESIDENCE OF M. F. HEATH, CHESTNUT AVENUE

THEY ARE GOING FAST

Choice Building Lots at **GATES PARK** 9-10-11000 feet to suit.

Prices are so low, you should not overlook this opportunity. There are restrictions, but you will like them.

VIEW LOOKING SOUTHWEST FROM HIGHEST POINT

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

This is a plat of Gates Park. Pick out your homesite now. There are 24 homes established here and more projected.

Take Tatnuck car, only 15 minutes from City Hall.

GATES PARK

City and Spring water, and all improvements.

One of Worcester's most beautiful suburban tracts

GATES PARK LAND CO.

476 MAIN STREET, WORCESTER Tel. 1046-2 B. H. Prior, Proprietor

VIEW LOOKING WEST FROM SAME POINT

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

CLEARVIEW AVENUE FROM BURNCOAT STREET SHOWING DEVELOPMENT

THINK of seeing every day, from your piazza or from your windows, the magnificent landscape shown below. Mount Wachusett and Rutland in the distance. Indian Lake and the Odd Fellows' Home and Park may also be seen at

CLEARVIEW

Come at once and pick out a site for your home. Agents will be glad to show you at any time to suit your convenience, whether you purchase or not.

THERE IS NO FINER LOCATION IN THE CITY OF WORCESTER

Prices low—terms reasonable

RESIDENCES OF H. L. GULICK AND JOHN B. MOSS AT CLEARVIEW

There are glorious sunsets to be seen from

CLEARVIEW

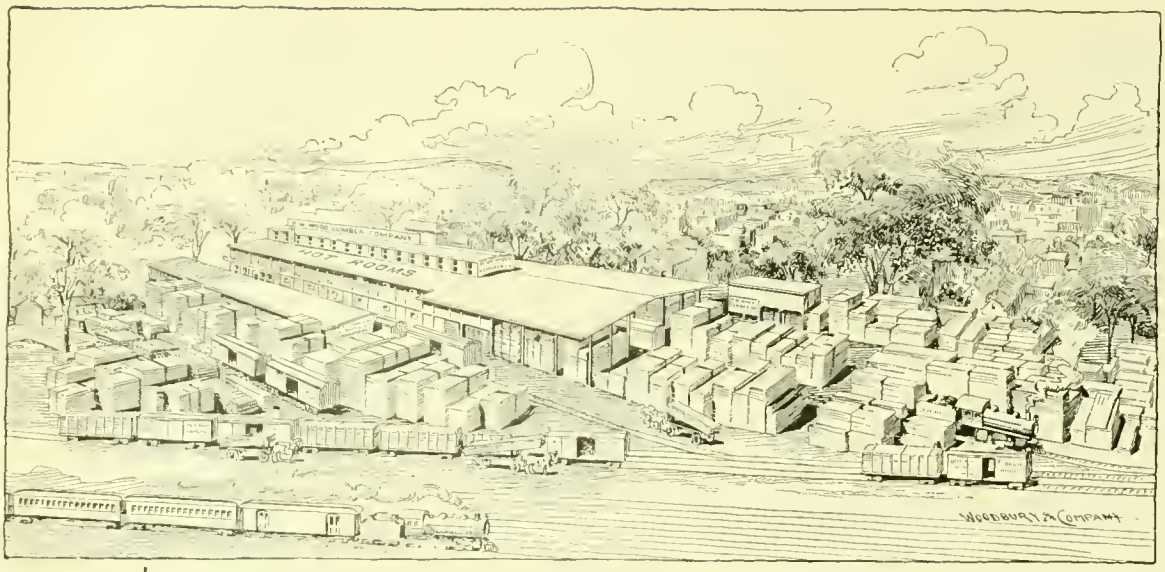
Clearview Avenue runs west from Burncoat Street. Twelve minutes' ride from City Hall, and has all improvements—granolithic walks, curbing and gutters, sewer, electricity, water and gas, shade trees growing, and all paid for. There will be no assessments for improvements.

Nothing but first-class residences allowed in this section of the city, so that you will always be surrounded by the Best.

JOSEPH K. GREENE, Owner

JOHN W. ELLAM, Sales Agent
On the land

OFFICE—715 State Mutual Building, Worcester, Mass.



WHEN YOU BUILD SEE US

Telephones
4720-4721

P. W. WOOD LUMBER COMPANY,

11 Garden Street
WORCESTER, MASS.

Competitive plate making begets Half-tones, Line Cuts, etc., of the competitive sort; when you buy in this manner you get what you pay for and no more.

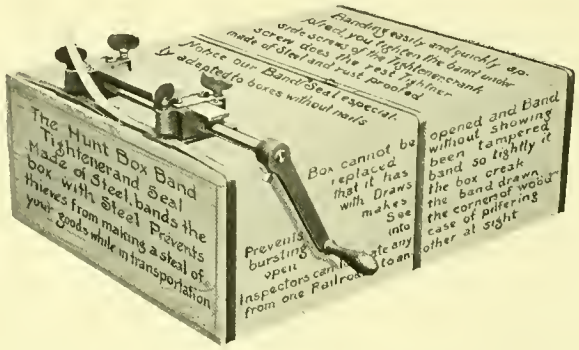
If you take care to deal with a trustworthy engraving house, and place your order to be handled to the best *mutual* advantage, it is handled on honor; you get the plate maker's interest, his imagination, his experience, his brains, and most important, *his co-operation.* All of which may be of more value than a mere question of price.

The Carlton Engraving Company

H. [illegible] LAWTON, *Pres. and Treas.* C. A. H. LAWTON, *Sec. and Treas.*

418 Main Street *Worcester's Busiest Corner*

Put Your Bands on Tight



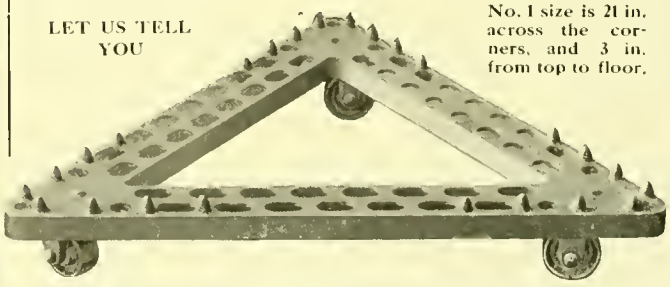
You're interested to know how the

Hunt Truck

can carry such heavy loads and give first-class service to you

LET US TELL YOU

No. 1 size is 21 in. across the corners, and 3 in. from top to floor.



All parts made of steel. All wheels and casters have roller bearings
CAPACITY, 1000 POUNDS

Galvanizing Department: Our alloy, zinc with steel, process has no superior

Hunt Metal Corner Co.

23 Phillips St., Westboro, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Some of Our Specialties

Automobile Oils
Engine Oils
Machine Oils
Cylinder Oils
Spindle Oils
Paraffine Oils
Black Oils
Ice Machine Oils
Lard Oils
Sperm Oils
Cotton Seed Oils
Olive Oils
Linseed Oils
Crown Red Oils
Wool Oils

Recovered Olive Oil
Commercial Castor Oil
Pure Castor Oil
Neatsfoot Oil
Rub Roll Oil
Soluble Oil
Lard Substitute Oil
Cutting Oil
Palm Oil

Egyptian Gum Size
Tallow, Fire Rendered
Greases
Lubricants
Petrolatum
Wiping Waste

Palm Oil Soap
Scouring Soap
Tallow Soap
White Laundry Soap
Olive Fig Soap
Red Oil Fig Soap
Automobile Soap

Sanitary Cold Water Paint
Mill Enamel Paint
White Priming Paint
Asphaltum Paint
Satin White Lead

The
Pierce & Rice Oil Company
Canterbury, corner Hammond Sts.
Telephone 1195 Worcester

THERE is a subtle charm and grace about all

BON TON
CORSETS

which appeals to your finer tastes and excites your admiration and fancy. BON TON Corsets are *absolutely without a rival*, each model an original conception of surpassing excellence in every detail. Batiste or coutil.

PRICES $3 to $15

BOSTON STORE
Denholm & McKay Co.

ALSO SOLE WORCESTER AGENTS FOR

Royal Worcester Corsets $1 to $3
and Adjusto Corsets $3 and $5

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

OUR BUSINESS IS REAL ESTATE

In all its branches. A square deal is our motto. We buy and sell, and build as well.

A THREE-DECKER IN PROCESS

We have three-deckers, two-apartment houses, farms, cottages, bungalows.

THE FINISHED HOUSE

LET US BUILD YOU A BUNGALOW

If you have a desire to own a home, call and see us. We know that we can satisfy you. Easy payments.

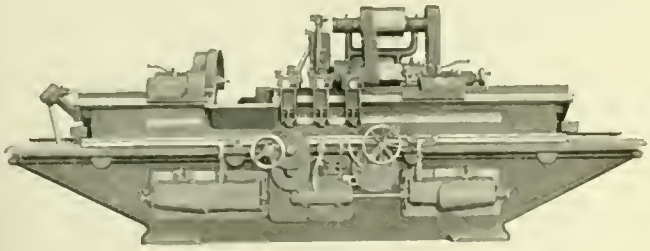
THE TRUMBULL COURT APARTMENTS

WE ARE THE AGENTS

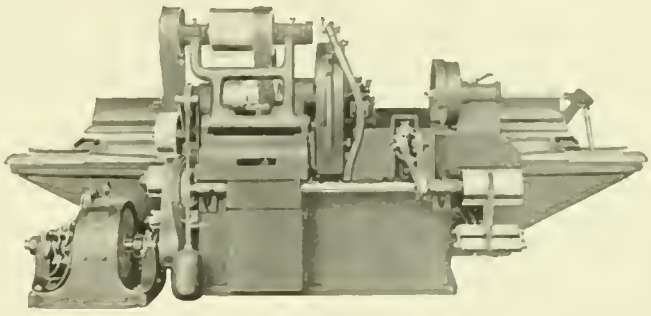
THE MOSHER REAL ESTATE CO.

737 SLATER BUILDING, WORCESTER Telephone 1705

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Front View
18 and 30 x 96" Self-Contained Gap Machine



Rear View

NORTON GAP GRINDERS

18 and 30 x 96 inch

are used in all the leading Railroad shops, and have proved beyond question their efficiency in grinding Piston Rods with heads in place, Driving Axles, Truck Axles, Crank Pins and Valve Stems. Better work at reduced cost should interest every Railroad Master Mechanic and Superintendent of Motive Power.

AGENTS.

Vonnegut Hardware Co., Indianapolis.
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.
Motch & Merryweather Mchy. Co., Cleveland, Detroit, Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver.
Henshaw, Bulkley & Co., San Francisco, Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan.

Norton Grinding Company

Worcester, Mass.

Chicago Store: 11 North Jefferson Street.

80 N

Hand Stripping Cards

German and
Domestic Heddles
for Cotton
and Woolen Mills

Revolving Top Flats
remounted
Fillets redrawn.

Quality sells our Goods

Phone 1070
Local and Long Distance

Dept. C-11
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

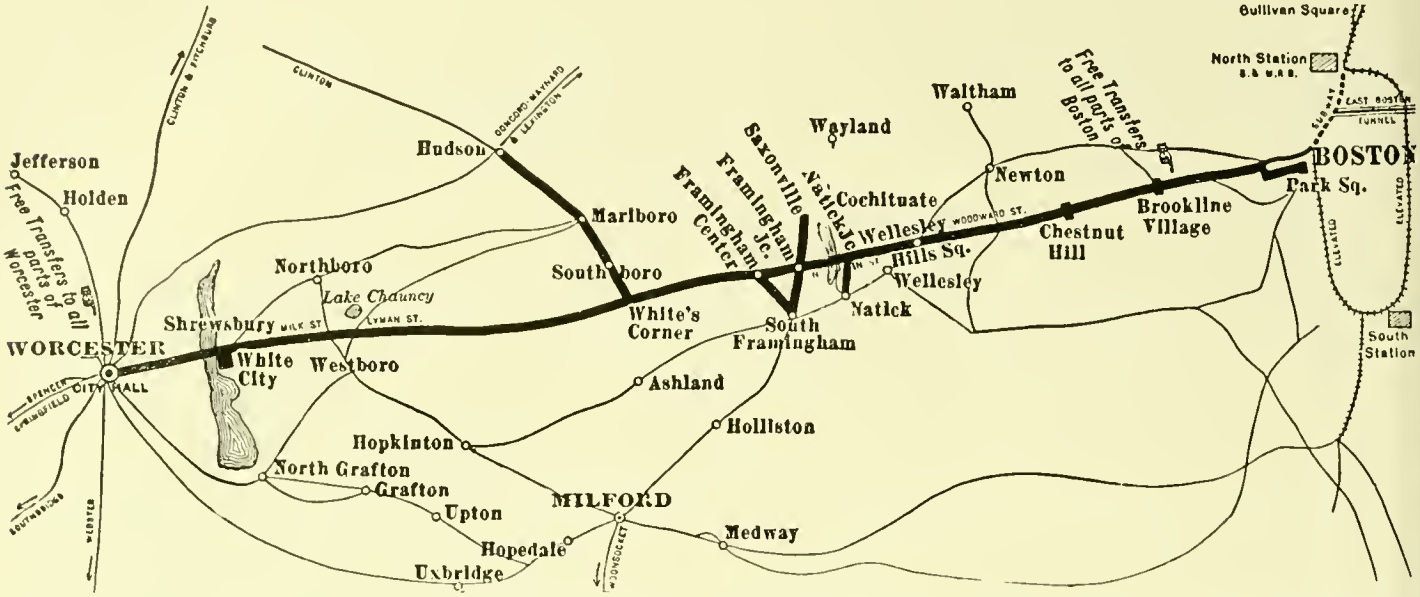
HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ONCE AN HOUR LIMITED



Limited Cars leave Worcester, City Hall and Union Station (daily except Sundays), at 7.05 A. M. and every 60 minutes until 5.05 P. M.

Leave Boston, Park Square, at 9.00 A. M. and every 60 minutes until 6.00 P. M.

Running time, one hour and fifty minutes, regular fares.

Round trip rates, One Dollar.

One way rates, Fifty-five cents.

Local cars every thirty minutes.

Try the Clean, Comfortable, Fast Line. Lowest Fares.

BOSTON & WORCESTER STREET RAILWAY CO.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Specialties that You Can Rely Upon

Buck & Co. "Best" Auto Oil
Powero Gasoline
Brilliantene—150 Fancy Water White Kerosene
Special Incubator and Brooder Oil

We also carry in stock a very large line of machinery oils and greases, steam cylinder, wool, lard and cutting oil

E. A. BUCK & CO.

Corner East Worcester and Casco Sts., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE VACATION SEASON is at hand. No dwelling house or ordinary safe offers any real security against loss by fire or burglary. This is a good time to secure absolute protection and freedom from anxiety by enlisting the services of the Worcester Safe Deposit Vaults.

Valuables in trunks and boxes are entirely safe and free from corrosion in our vaults. This Company will call for trunks or other large cases, receipt for them at the house, and convey them to the vaults, where they will be registered and certificates of deposit forwarded by mail.

Entrance at the Left of Grand Stairway on the Street Floor

Worcester Safe Deposit Vaults (Incorporated)

WILLIAM D. LUEY, President
JOHN H. GOES, Secretary
HALLECK BARTLETT, Treasurer

OFFICE HOURS
Daily from 9 A. M. to 4 P. M., except on Saturday
Saturday from 9 A. M. to 1 P. M.

State Mutual Building

340 Main Street — Worcester, Mass.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall

If Business is Poor

You need us to brace it up.

If Fair

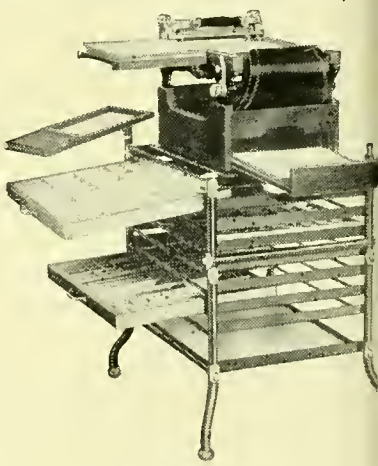
We can help you to make it better.

If First Rate

We can keep it so.

By our

WRITER-PRESS



THE WRITERPRESS

method of giving you exact copies of your typewritten letters, we are in shape to take RUSH orders, do them thoroughly, neatly and QUICKLY. We have type enough and forms enough to start and finish your work, right off, if you want it. Try us.

Post Cards

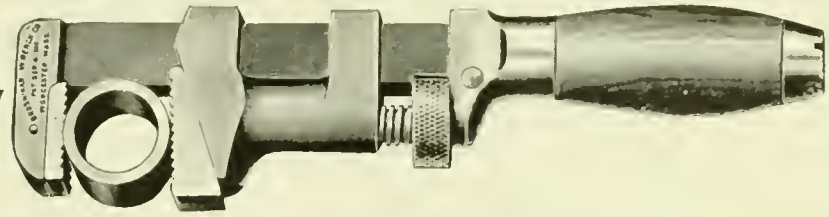
If your dealer has not some special post card you want, try us. We wholesale post cards to the trade, and have in stock all the time thousands of different cards, ranging in selling prices from 4 for 1c, 2 for 1c, 1c each, up to 10c, 25c, 50c and $1.00 each. Come and see our cards at No. 5 Green Lane, Worcester.

THE JONES SUPPLY CO.

Tel. 3364-3 — Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Look at the Wedge-Shaped Jaw



¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp*.

¶All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

A One Hand Tele-phone Index

GET ONE

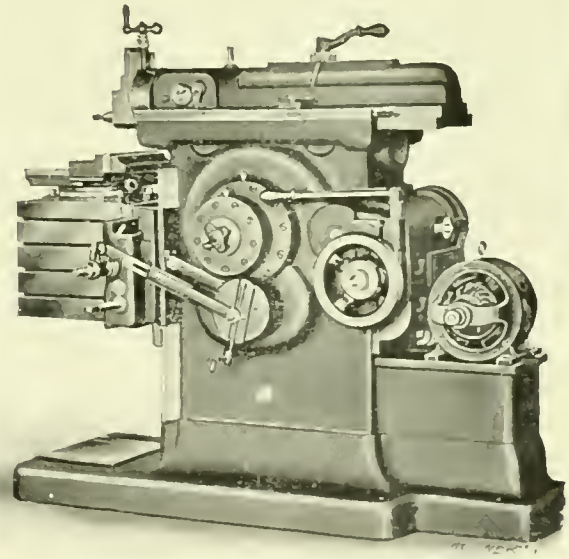
You have now an opportunity to possess a handy Index in small compass, that can be operated with one hand. The arrangement of frequent calls will please you. Telephone 1269 and agent will call and show sample.

NEW ENGLAND TELEPHONE INDEX CO.

1013 Slater Building, Worcester, Mass.

STOCKBRIDGE

New 18″ Shaper All-Geared Drive



Originality characterizes Stockbridge Shapers

STOCKBRIDGE MACHINE CO.

WORCESTER, MASS., U.S.A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Duncan & Goodell Co., Leading Hardware Dealers of New England. **Worcester, Mass.**

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.

Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars

Ferrules and Sheet Metal Specialties

Case Hardening

Nickel, Copper and Brass Plating

also Japanning

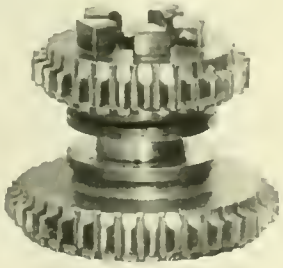
MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

AUTOGENOUS WELDING IN WORCESTER

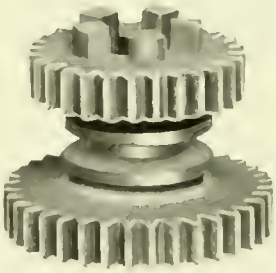
Any broken parts in your machine may now be made



Transmission Sliding Gear
Before Welding

As good as new by

D. A. Baldwin & Co.



Same Gear
After Welding

COMMONWEALTH MOTOR MART, 22 COMMERCIAL ST.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

YOUR VACATION

will not be complete without a

Camera

WHEATON

The Camera Man sells them.

Prices
$1.00 to $75.00

Ask to see the Post Card size at $20.00 and $25.00

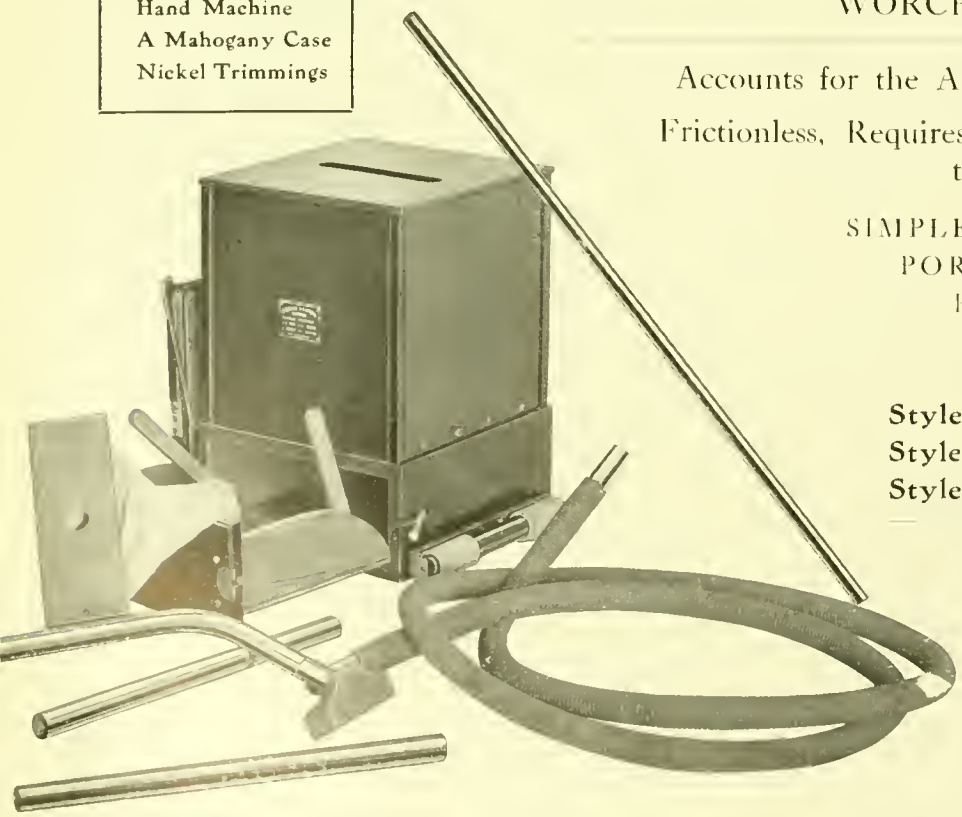
WHEATON & BOWERS

PHOTO DEPARTMENT
366 MAIN STREET, WORCESTER
PHONE 2128

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.

Manufacturers
Worcester

Pneuvac Company

Blake Building
Boston, Mass.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

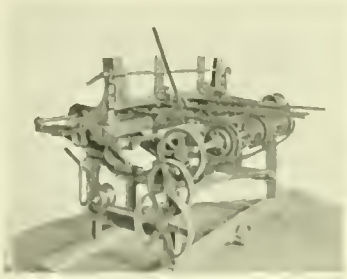
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



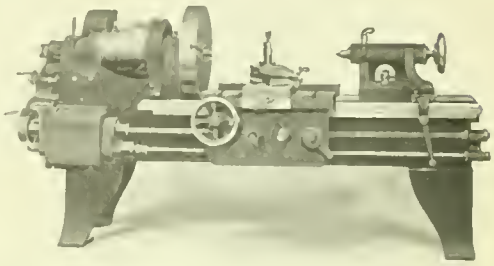
COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

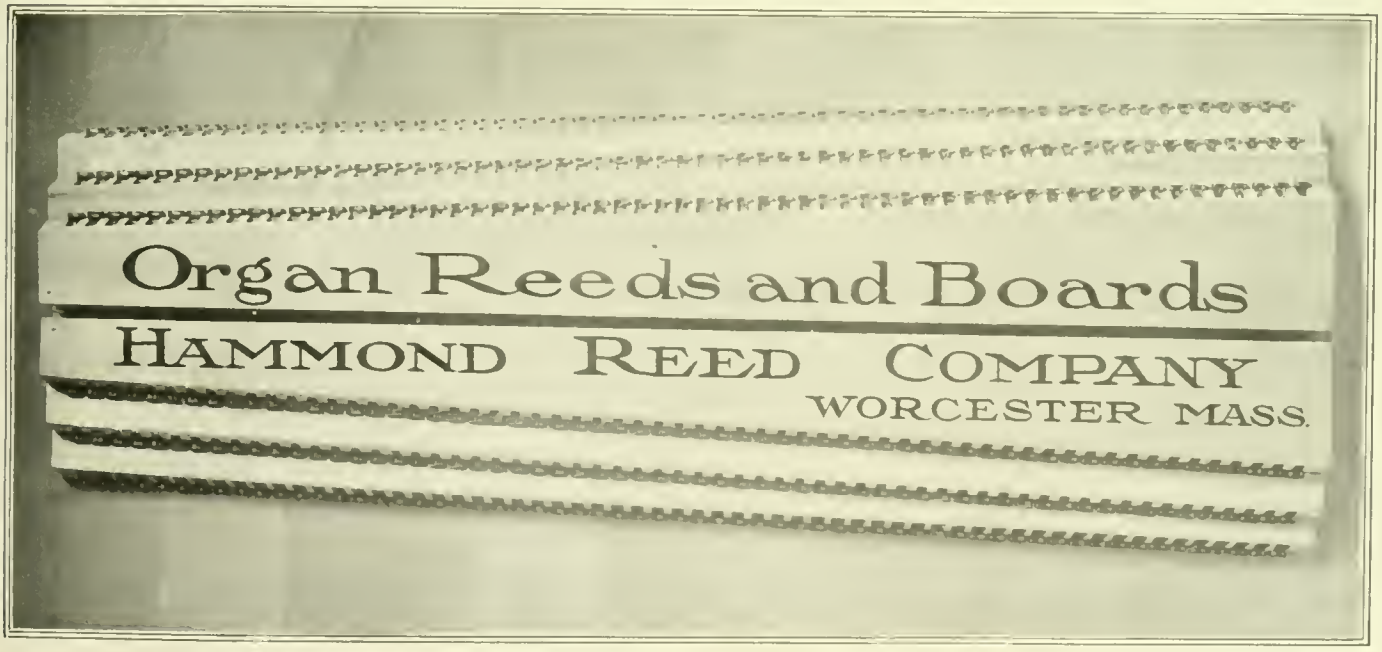


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all description

TELEPHONE

Walker Building



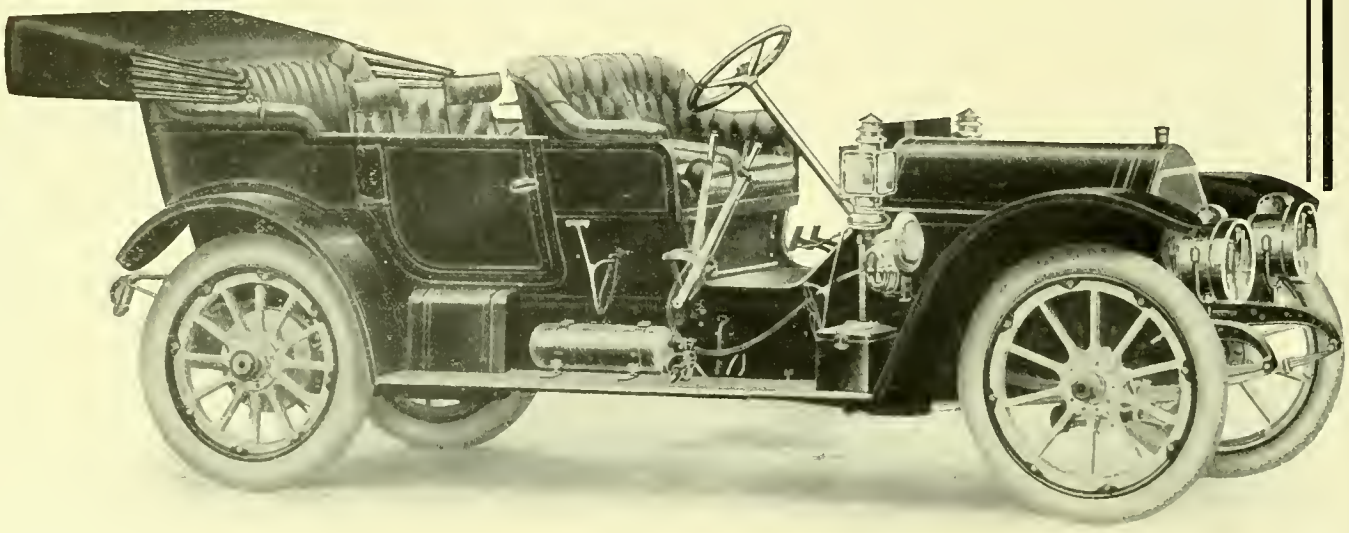
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE WHITE LINE RADIATOR BELONGS TO THE STEARNS

Stearns

Motor Cars

FULLY EQUIPPED WITH CONTINENTAL TIRES AND DEMOUNTABLE RIMS



30-60 H. P. SEVEN-PASSENGER TOURING CAR

Standard type of touring car — Removable tonneau seats — Either shaft or chain drive

R. H. HIGGINS COMPANY

96 Commercial Street, Worcester, Massachusetts

PHONE 2171

Demonstrations upon request

WE ARE WORCESTER COUNTY HEADQUARTERS FOR CONTINENTAL TIRES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Gold Blast Ginger Ale, *Hewett's Private Stock Rye*

Iroquois Bohemian Lager, *Frank Jones' Golden Ale*

and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street

Telephone 2455 *Worcester, Mass.*

WIRING A HOUSE

so that its surroundings are perfectly safe requires a thorough knowledge of the business.

GOOD ELECTRICAL WIRING

means immunity from fire and lower rates of insurance.

That is why our work is always cheap. It's safe, and there is no cause for worry after the work is done. Get us. It's safest and cheaper as well. See us for repairs.

W. D. KENDALL COMPANY

TELEPHONE 5723 268 Main Street

MODELING WOOD CARVING

Models for Wood, Stone, Metal, Plaster, Cement

Architectural and Decorative Ornaments in Plaster, Papier-Maché and Composition

L. C. Hamill

94 Commercial Street

Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

Opposite City Hall Park

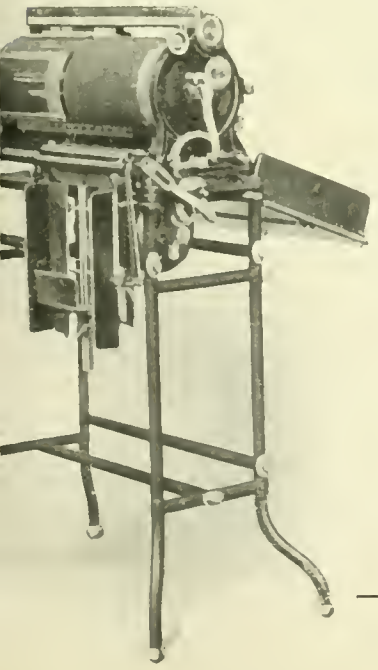
New Park Hotel

Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager



MULTIGRAPHING. THIS IS THE MACHINE UPON WHICH WE PRINT *FORM LETTERS,* FOR FOLLOW-UP PURPOSES. LET ME SEND YOU PRICES

ADDRESSING. YOUR MAILING LIST CAN BE SET UP ON OUR *ADDRESSOGRAPH,* SAVING TIME AND MONEY. PRICES ON APPLICATION

EXPERT TYPEWRITING A SPECIALTY

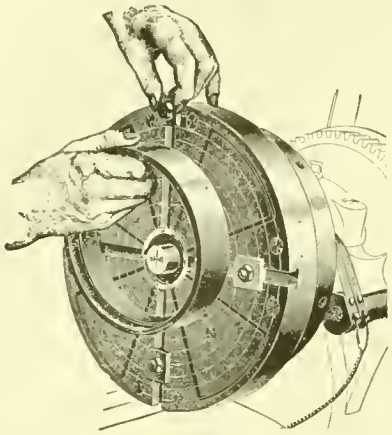
WORCESTER MAILING CO.

GRACE L. BELKNAP,
Proprietor

Room 704 State Mutual Bldg.

TELEPHONE 3480 WORCESTER

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

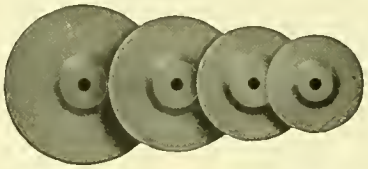
O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks



Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

BABY CARRIAGE
BICYCLE
CARRIAGE
MOTORCYCLE
AUTOMOBILE

TIRES

PRICES RIGHT

24 AUSTIN ST., WORCESTER TEL. 6239-2

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

TRADEMARK
NORTON
REGISTERED

The Cutting Face of a Grinding Wheel

has thousands of little tools cutting off little chips. It makes a big difference what these little tools are made of, just as it makes a big difference what quality of steel is used in making steel tools. It makes a big difference as to how each little tool holds its cutting edge. ¶ A Norton wheel gets its good-cutting face from Alundum. Each little grain of Alundum that is working is a tool in perfect condition for good work. ¶ Insist on a grinding wheel made of Alundum, just as you would insist on the best grade of steel for your steel tools.

Norton Company, Worcester, Mass.

New York, 50 Church St. Chicago, 11 No. Jefferson St. Niagara Falls, Alundum Plant

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xxxvii
Alsten & Goulding, auto supplies, xi
American Car Sprinkler Co., car sprinklers, v
Blake, Jr., & Co., George F., iron and steel, and supplies, xxxiv
Blanchard & Co., F. S., printers, Back cover
Boston & Worcester Railway, xxv
Brosnihan Wrench Co., xxviii
Brownell, George L., twisting and spinning machinery xxxix
Buck & Co., E. A., oils and gasoline, xxvi
Carlton Engraving Co., xxi
Carr Co., George W., granolithic and concrete work, xv
Clearview Land Co., xix-xx
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers, ii
Commonwealth Motor Mart, xxx
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, xxxii
DeLong, W. H., dental disks, xxxvii
Duncan & Goodell Co., xxix
Eddy Company, viii
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxxii
Hamill, L. C., xxxv
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxxv
Heywood Boot & Shoe Co., fine shoes, ii
Higgins Co., R. H., Stearns Cars, xxxiii
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xxiv
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xxxvii
Hunt Metal Corner Co., xxi
Jones Supply Co., Writerpress, xxvii
Jackson St. Foundry, iron castings, xxx
Kidder, R. E., drawing tables, v
Kendall, W. D. Co., electricians, xxxv
Lincoln St. Realty Co., xiii
Luce, E. B., commercial photographer, xxxii
Marsh, B. F., xvi
Morgan Construction Co., rolling mill equipment, iv
Mosher Real Estate Co., xxiii
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxx
Multiple Woven Hose & Rubber Co., fire hose and belting, xxxix
New England Anchor Fence Co., ii
New England Audit Co., xii
N. E. Motor Supply Co., xxxvii
N. E. Telephone Index Co., xxviii
New Park Hotel, xxxvi
Norcross Brothers Co., contractors and builders, iii
Norton Company, grinding wheels, xxxviii
Norton Grinding Co., grinding machines, xxiv
O'Connell Real Estate Co., xx
People's Savings Bank, x
Pierce & Rice Oil Co., paints, oils and gasoline, xxii
Pond Machine & Foundry Co., xxx
Powers Company, F. E., coal, xxix
Pratt & Inman, iron and steel, xxxiv
Prentice Bros. Company, drilling machines, engine lathes i
Prior, Bert F., xvii-xviii
Provident Life & Trust Co., xii
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Royal Worcester Corset Co., xxii
Smith-Green Co., xiv
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxx
Standard Mfg. Co., vii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xxi
Stone & Foster Lumber Co., xxxiv
United States Envelope Co., xii
Union Water Meter Co., water meters,
Walker & Co., O. S., chucks, xxxvii
Warren Hotel, The, xxxvi
Warren, J. F. & W. H., leather belting and mill supplies, xxxii
Wheaton & Bowers, photo supplies, xxxi
Wheelock Fence Company, viii
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxxix
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xxxviii
Wire Goods Co., wire hardware, x
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xxxi
Wood Lumber Co., P. W.,
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xxvii
Worcester Machine Screw Co., set, cap and machine screws, xxxviii
Worcester Mailing Company, xxxvi
Worcester National Bank, iv
Worcester Safe Deposit Vaults, xxvii
Wright Co., M. S., vacuum cleaners, xxxi
Wright Wire Co., wire and wire cloth, wire rope, etc. i
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

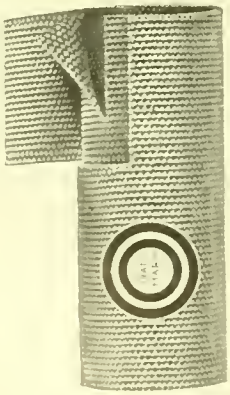
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

ANNOUNCEMENT

ON July 1st, 1910, the business heretofore conducted for thirty years under the name of F. S. Blanchard & Co. became a corporation under Massachusetts laws, under the style of **The Blanchard Press.** The management, capital, purpose and aims of the company remain unchanged, with the exception that Mr. William B. Crombie and Henry F. Blanchard become financially interested as stockholders in the new corporation.

Mr. F. S. Blanchard is president and treasurer; William B. Crombie, vice-president, and Henry F. Blanchard, secretary.

If possible, we expect to do a little better Printing than ever before, and a personal interest and pride in each job will, as heretofore, be a feature of the service of

The Blanchard Press

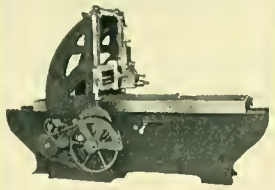
6 Walnut Street Worcester

MILL EQUIPMENT, ETC. GAS PRODUCERS

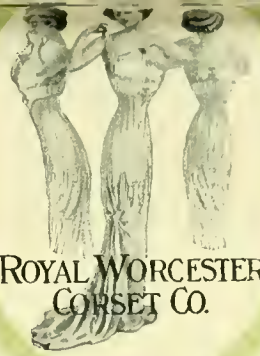
MORGAN CONSTRUCTION COMPANY

STATE MUTUAL BLDG.

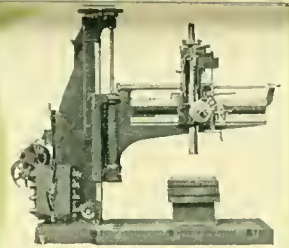
PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY



ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES

PRENTICE BROS. CO.

SLATER BLDG.

PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE GRATON & KNIGHT MFG. CO.

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

ORGAN REEDS
HAMMOND REED COMPANY

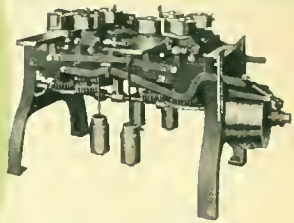
FOR ALL MOTOR CARS

OIL ZUM

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

"MADE IN WORCESTER, U.S.A."

PROPOSED NEW UNION STATION

CITY HALL

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

GOVERNMENT BLDG.

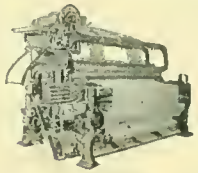
Golbert Last Co.

"BI-MOORE" BEST HOSE

MULTIPLE WOVEN HOSE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

HILL DRYER CO.

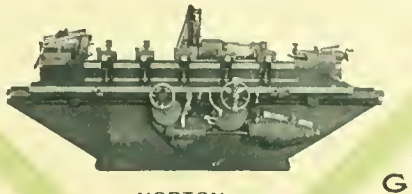
GOOD ENVELOPES

UNITED STATES ENVELOPE CO.

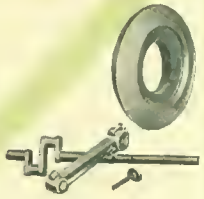
ART
NOVELTIES
VALENTINES

THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES

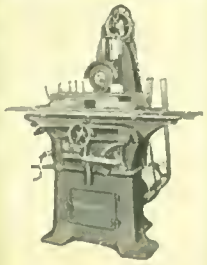


NORTON GRINDING CO.



The WYMAN & GORDON CO.
DROP FORGINGS

O. S. WALKER & CO.



SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.

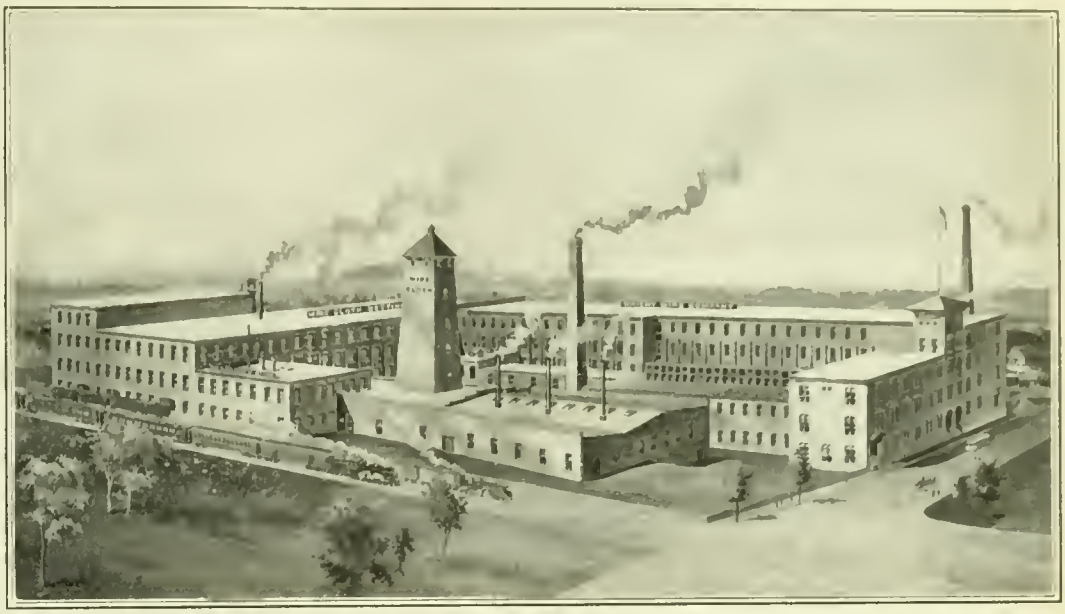
Everything in Wire

TRADE MARK

The Wire Goods Co.

WIRE

Wire Cloth
Picture Cord
Coal and Sand
Screens
Foundry Riddles
Wire Rope and Cable
Poultry Netting
Elevator Cabs
and Enclosures
Flower Bed Guard
Trellis and
Ornamental Fencing



WORCESTER FACTORY

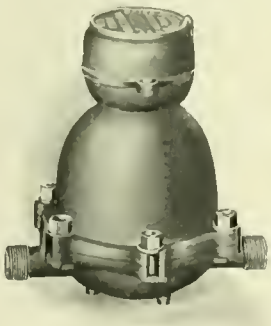
WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

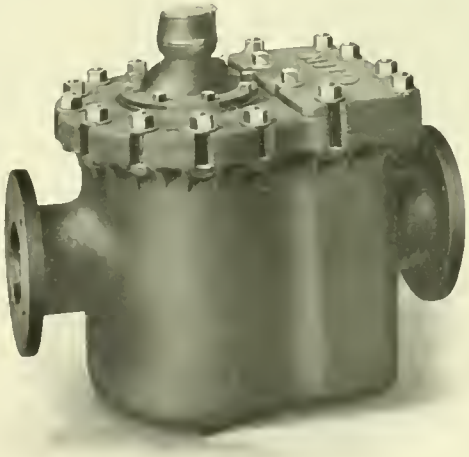
Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.

The Leaders

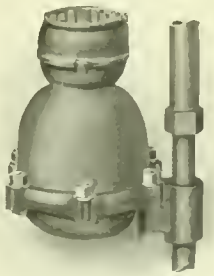
A Postal will bring Catalog W 46



The King Disk Meter

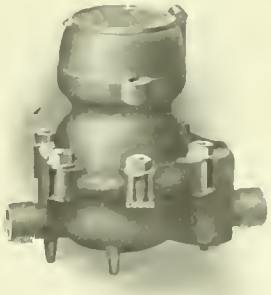


Nilo Meter



The King Disk Meter
for Vertical Setting

Union Rotary M[illegible]
Made in Worcester.



Columbia Meter

Union Water Meter Co.

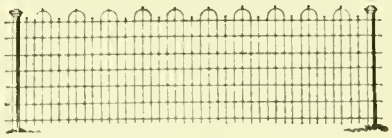
Worcester, Mass.

YOU will benefit TH[illegible]ng that you sow this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

Your Catalog

¶ Just a word about that catalog of yours.

¶ If it is intended to act as a salesman and sell your goods, why not have it attractive and clothed in proper form? Successful houses do not send out their representatives clad in overalls and jumpers.

¶ We have the equipment and "know-how" to take your copy, arrange it in proper form, select the right kind of type, paper, ink and cover and blend them into one harmonious whole, which, when finished, will give it that exclusive character known as **"style."** We are constantly doing it for the most fastidious buyers in New England. We can do it for you. We don't have to tell you what we **will** do, but can show you what we **have** done.

The Commonwealth Press

Oliver B. Wood

50 Foster St., Worcester, Mass.

High Grade Shoes for Men

Factory and Main Office

70 Winter St., Worcester, Mass.

New York Office

127 Duane St., New York City

Retail Store

415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer

Buenes Aires, Argentine Republic

Patterson & Ruhfus

Melbourne and Sydney, Australia

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

BOSTON SAFE DEPOSIT & TRUST CO. BUILDING, Boston, Mass.
Shepley, Rutan & Coolidge — Architects
The Norcross Brothers Co. — Builders

THE NORCROSS BROTHERS COMPANY

General Contractors and Builders

WORCESTER, MASS.

NEW YORK — BOSTON
PROVIDENCE — WASHINGTON

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

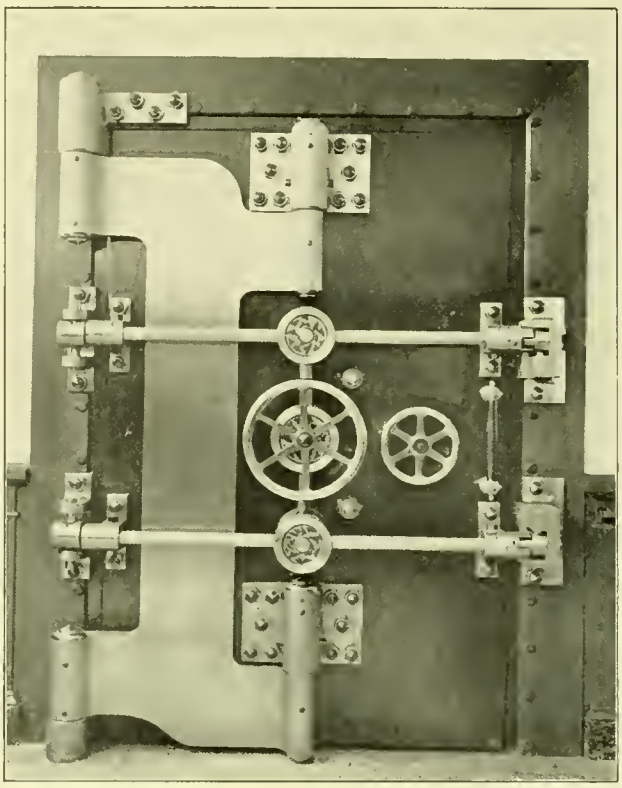
Worcester Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Vacation Period

Anxiety concerning the safety of valuable papers, jewelry, silver-plate and other articles may be avoided by renting a safe-deposit box in our fire and burglar proof vaults at $4 per annum.

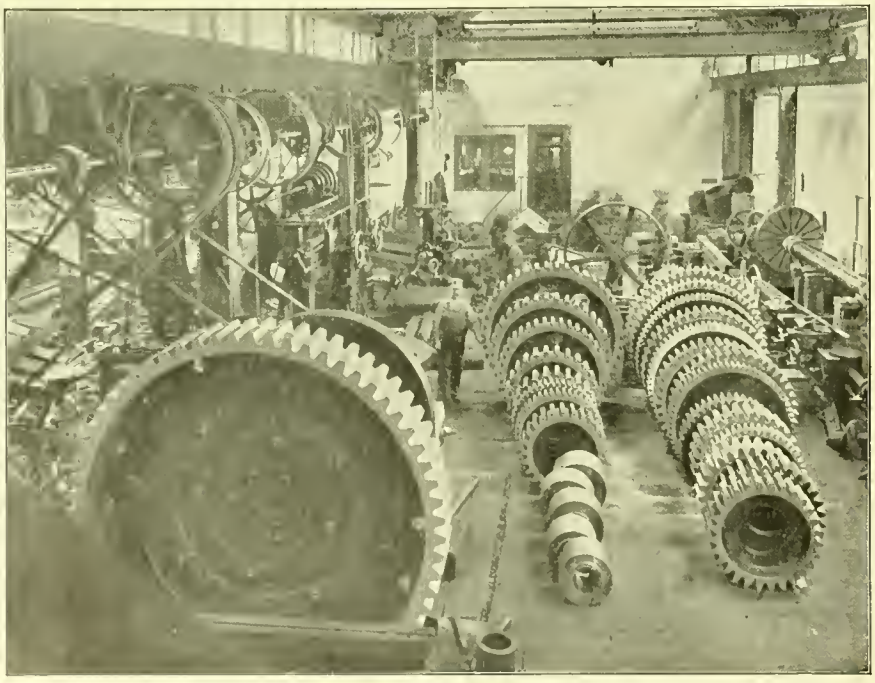
VALUABLE PACKAGES may be stored in our storage vaults for a small monthly charge.



Worcester National Bank

FOUNDED 1804

JAMES P. HAMILTON, *President* S. D. SPURR, *Cashier* F. M. HEDDEN, *Assistant Cashier*



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

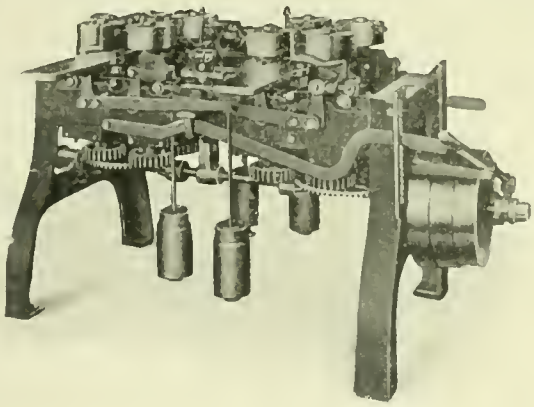
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST

AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

Found at Last!

A boring machine for wood built on the right principle. Workmanship and material the best. New features.

Send for circular.

R. E. KIDDER

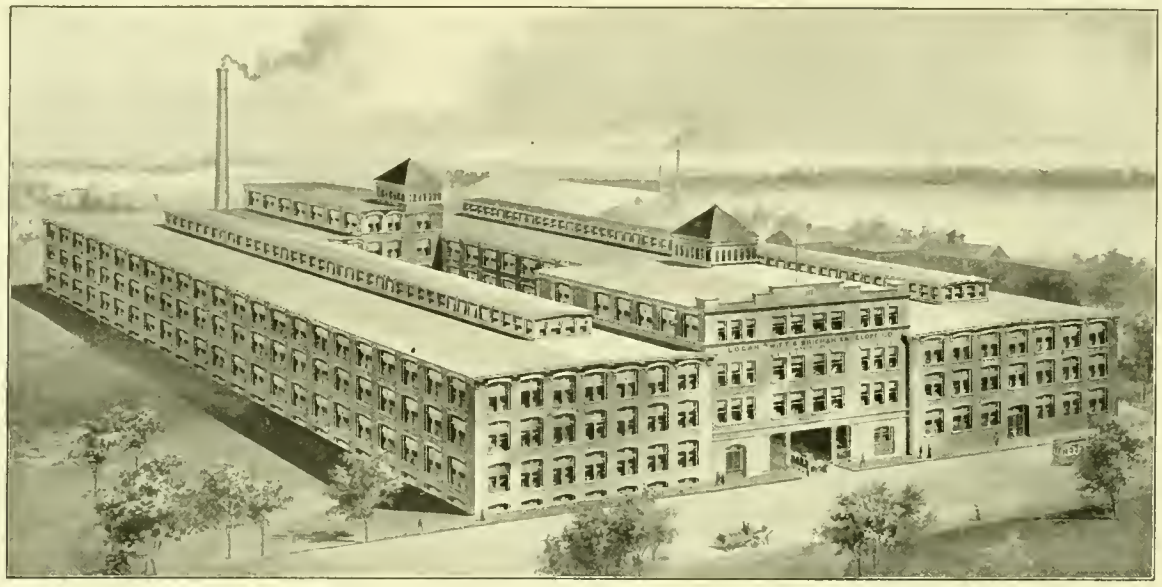
13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

United States Envelope Co.

Manufacturers of Standard ENVELOPES



THE OUTLOOK ENVELOPE insures economy and absolute accuracy in the addressing of all your mail matter.
The Improved COLUMBIAN CLASP ENVELOPE. The best and most satisfactory merchandise envelope made.
Specialists in Steel Die Stamping or Commercial Work. Samples and prices of our standard goods furnished by your stationer or printer.
Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing, Hand Stripping Cards, German and Domestic Heddles

for Cotton, Woolen and Worsted Mills

Revolving Top Flats
remounted
Fillets redrawn

QUALITY is our
Inducement

Phone 1070
Local and Long Distance

Dept. C-II
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

1909

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

The "TRU-SHAPE" Pack-Flat Shoe Tree

will keep YOUR shoes in shape. They will wear longer and make your feet comfortable and healthy

PRICE PER PAIR, 50 CENTS

If your dealer cannot furnish, write to

Standard Manufacturing Company

186 Union Street, Worcester, Mass., U.S.A.

Made in Worcester.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

1851 G&K 1910

TRADE MARK
REG. U S. PAT. OFF.

THE fifty-nine years between 1851 and 1910 are appropriately bridged by the "G. & K." trade mark. This trade mark is the embodiment of fifty-nine successful years' experience as belt makers, forty-three of which we have been tanners also. It represents the growth of a business which in the sixties was practically unknown outside of Worcester, and which to-day has an established reputation in every State in the Union as well as in Canada, Mexico, Europe and other foreign countries. It represents the growth of an idea into an accepted fact, that it pays, and pays handsomely, to use belting especially adapted to the conditions under which it has to run, regardless of first cost. It represents the "square deal" as between the dealer, consumer and manufacturer. It represents the highest standard of quality.

Look for these trade marks; they are stamped every ten feet on the belting which we produce

Leather belting and other G. & K. products, such as lace leather, leather packings, belt dressings, belt cement, are carried in stock by dealers and supply houses located in the principal manufacturing centers; each of our branches mentioned below also carries a complete stock.

THE GRATON & KNIGHT MFG. CO., Oak Leather Tanners and Belt Makers, Worcester, Mass.

BRANCHES: Atlanta, Ga.; Boston, Mass.; Chicago, Ill.; Milwaukee, Wis.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Pa.; Portland, Ore ; San Francisco, Cal.; Seattle, Wash.; St. Louis, Mo.

Photographic Apparatus Materials and Chemicals for Manufacturers

CAMERAS AND SUPPLIES
WHEATON & BOWERS
KODAKS
366 MAIN ST.
WORCESTER

A complete line of Cameras, Films, Plates, Papers and Mounts for Amateur Photographers

Developing and Printing

Wheaton & Bowers

WHEATON'S CAMERAS

Photographic Department

366 Main Street, Worcester

WHEATON'S CAMERAS

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building

Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

HIGHEST QUALITY MOTOR OILS

FOR GAS AND STEAM CARS

The Finest Automobile Oils Obtainable

TAKE ANY QUANTITY ON TRIAL SUBJECT TO YOUR APPROVAL. YOU'LL BE CONVINCED THAT OUR CLAIMS ARE *ABSOLUTELY TRUE*

A. G. GUY COMPANY

102 COMMERCIAL STREET WORCESTER, MASS.

Between Exchange and Central Sts.

Telephone 5250

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Bradley Car Works

Manufacturers of

Railway and Electric Cars

Of Every Description

Snow Plows, Wheels, Axles, Castings

Osgood Bradley & Sons, Proprietors John E. Bradley

Established 1832

Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Oilzum WINS

THE APPROVAL
of those who demand the highest
STANDARD OF EXCELLENCE

AS THE HOT SEASON ADVANCES USE OILZUM, WHICH IS GUARANTEED TO STAND UP AND LUBRICATE BEST UNDER EXCESSIVELY HIGH TEMPERATURES.

A Special Grade of OILZUM for Every Gasoline or Steam Car

Send for Booklet, "OILZUM WINS," containing report of tests at WORCESTER POLYTECHNIC INSTITUTE of all prominent Gas Engine Oils

DISTRIBUTORS

SAMUEL WIGNEY, 3626 Mettler St., Los Angeles, Cal.
KANSAS CITY AUTOMOBILE SUPPLY CO., Kansas City, Mo.
E. J. NORRIS & CO., Sioux Falls, So. Dakota.
SANDERS BROS. Co., Richmond, Va.
J. C. BROWN & COMPANY, Southern New England Distributors. 27 Washington Street, Providence, R. I.

SOLD BY DEALERS EVERYWHERE

MANUFACTURED BY

The White & Bagley Co., Worcester, Mass., U.S.A.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The One Residential Center of Interest and Activity in Worcester is

Ten minutes from City Hall

LENOX

On Pleasant Street, opp. Richmond Heights

The Homesite Beautiful

Men at work on LENOX improvements

Where Discriminating Homeseekers are Buying

Because LENOX homesites are Nature's "beauty spot of Worcester," accessible, healthy and in the best neighborhood in the city. The only homesites where over $60,000 are being expended in the finest development work ever undertaken in Worcester building sites. Large lots, wide streets, parkways, granolithic walks, handsome entrance feature, water, sewers, gas, electric lights, every city improvement, proper restrictions.

Where Shrewd Investors are Buying

Because the LENOX opportunity means "a million-dollar development in Worcester realty." No homesites in this city compare in present or future value with those at LENOX, where homeseekers and investors are buying THE BEST AT THE PRICE OF THE ORDINARY.

You say—and will ALWAYS say—"Good Morning" to good neighbors at LENOX, where values are increasing more rapidly than in any other residential section in the city.

Representatives at LENOX daily and Sundays to show you the property. Call or send for plans, prices and our booklet entitled "The Beauty Spot of Worcester."

THE O'CONNELL REAL ESTATE COMPANY

Members Massachusetts Real Estate Exchange

Executive Offices corner Main and Pleasant Streets

Telephone 2088

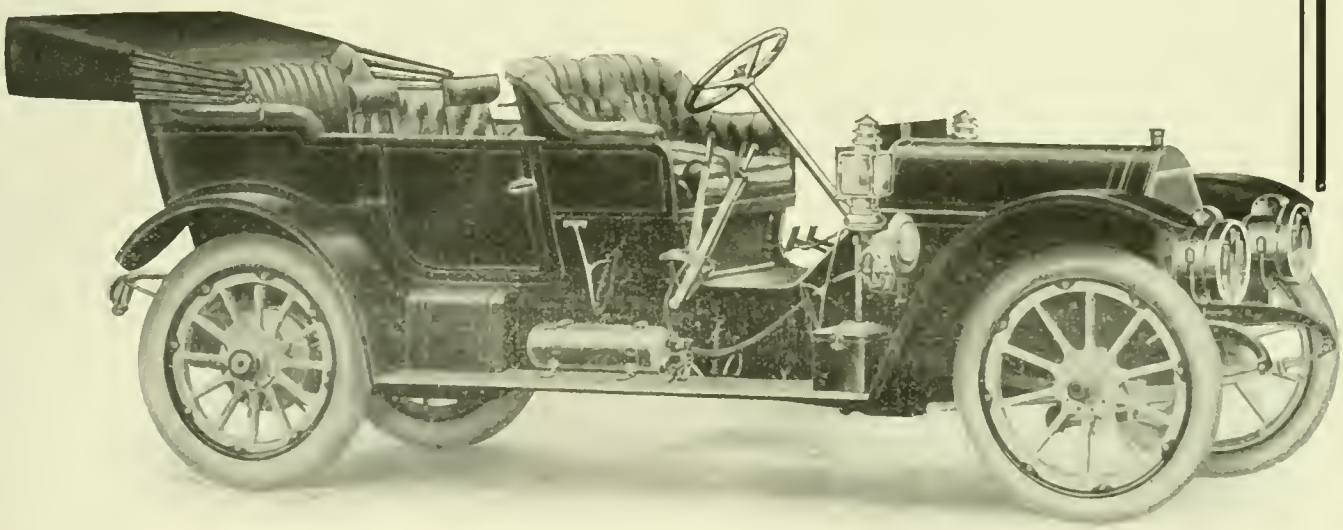
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE WHITE LINE RADIATOR BELONGS TO THE STEARNS

Stearns

Motor Cars

FULLY EQUIPPED WITH CONTINENTAL TIRES AND DEMOUNTABLE RIMS



30-60 H. P. SEVEN-PASSENGER TOURING CAR

Standard type of touring car — Removable tonneau seats — Either shaft or chain drive

R. H. HIGGINS COMPANY

96 Commercial Street, Worcester, Massachusetts

PHONE 21-1

Demonstrations upon request

WE ARE WORCESTER COUNTY HEADQUARTERS FOR CONTINENTAL TIRES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

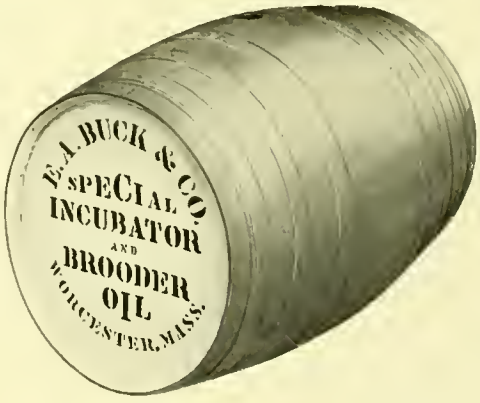
Specialties that You Can Rely Upon

E. A. BUCK & CO.

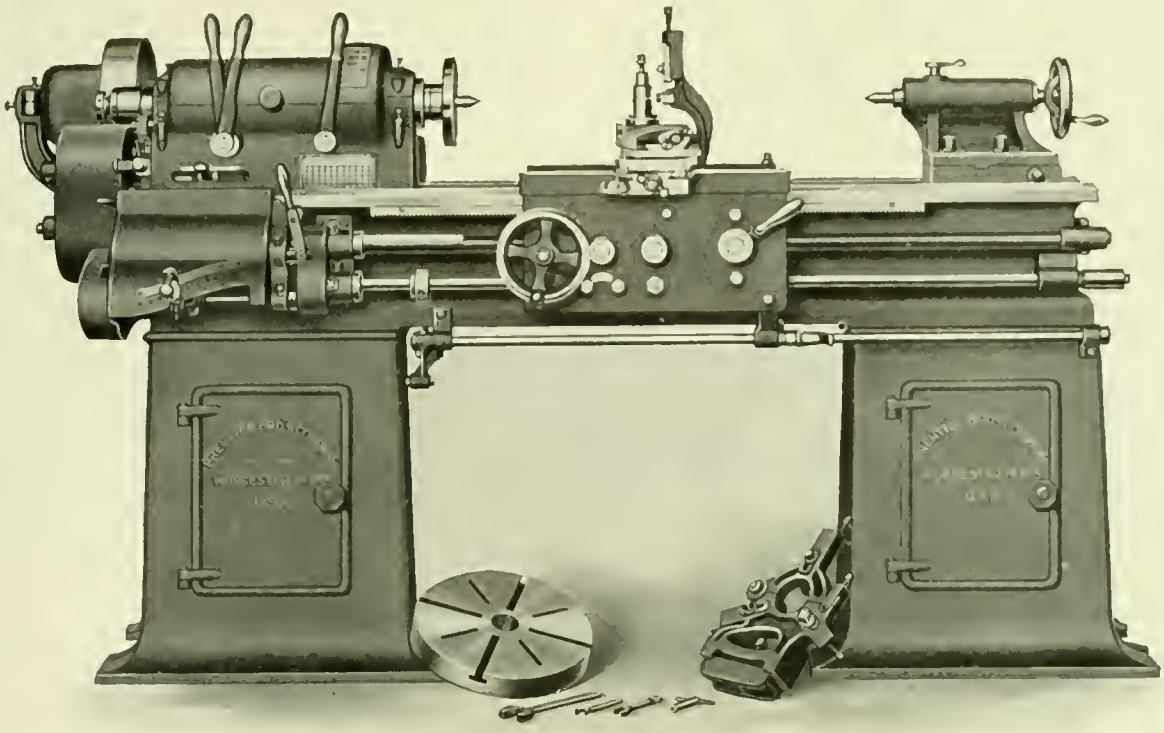
Corner East Worcester and Casco Sts., Worcester, Mass.

Palmer, Mass.

Machinery Oils
and
Greases,
Steam Cylinder,
Wool, Lard
and
Cutting Oils



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



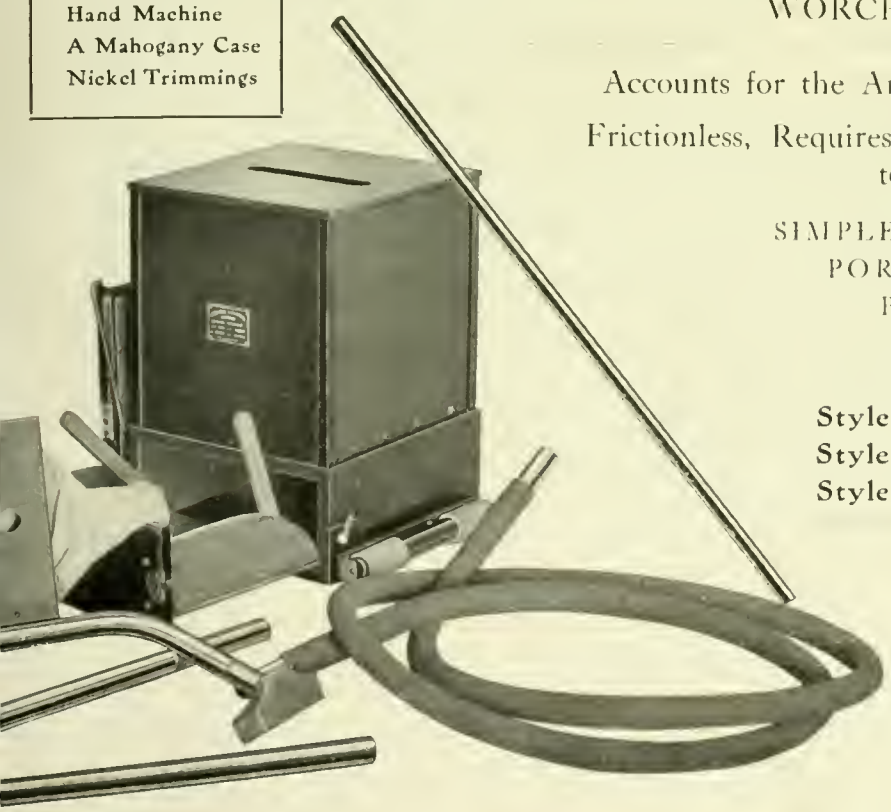
PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.
Manufacturers
Worcester

Pneuvac Company
Blake Building
Boston, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

OUR BUSINESS IS REAL ESTATE

In all its branches. A square deal is our motto. We buy and sell, and build as well.

A THREE-DECKER IN PROCESS

We have three-deckers, two-apartment houses, farms, cottages, bungalows.

THE FINISHED HOUSE

LET US BUILD YOU A BUNGALOW

If you have a desire to own a home, call and see us. We know that we can satisfy you. Easy payments.

THE TRUMBULL COURT APARTMENTS

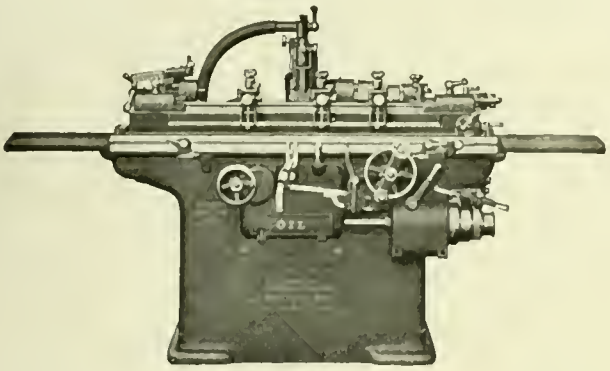
WE ARE THE AGENTS

THE MOSHER REAL ESTATE CO.

737 SLATER BUILDING, WORCESTER Telephone 1705

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The 6 x 32 Norton Grinder



Front View

is particularly adapted to rapid production of small cylindrical work.

Hardened rolls ⅜″ diameter, 1″ long, for roller bearings are ground at the rate of **200 per hour,** limit .00025″, removing .010 from diameter.

Automobile valve stems ½″ diameter, 6½″ long, are ground at the rate of **50 per hour,** limit .0005, removing .010 from diameter.

These facts should interest you.

AGENTS.

Vonnegut Hardware Co., Indianapolis.
Robinson, Cary & Sands Co., St. Paul and Duluth.
Manning, Maxwell & Moore, Pittsburg, St. Louis, Philadelphia, Atlanta
Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.
Motch & Merryweather Mchy. Co., Cleveland, Detroit, Cincinnati.
The Canadian Fairbanks Co., Montreal, Toronto, Vancouver.
Henshaw, Bulkley & Co., San Francisco, Los Angeles.
Ludw. Loewe & Co., Ltd., London, Berlin, European Agents.
F. W. Horne, Yokohama, Japan.

Send for Circular No. 101.

Norton Grinding Company

Worcester, Mass.

Chicago Store: 11 North Jefferson Street.

78 N

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

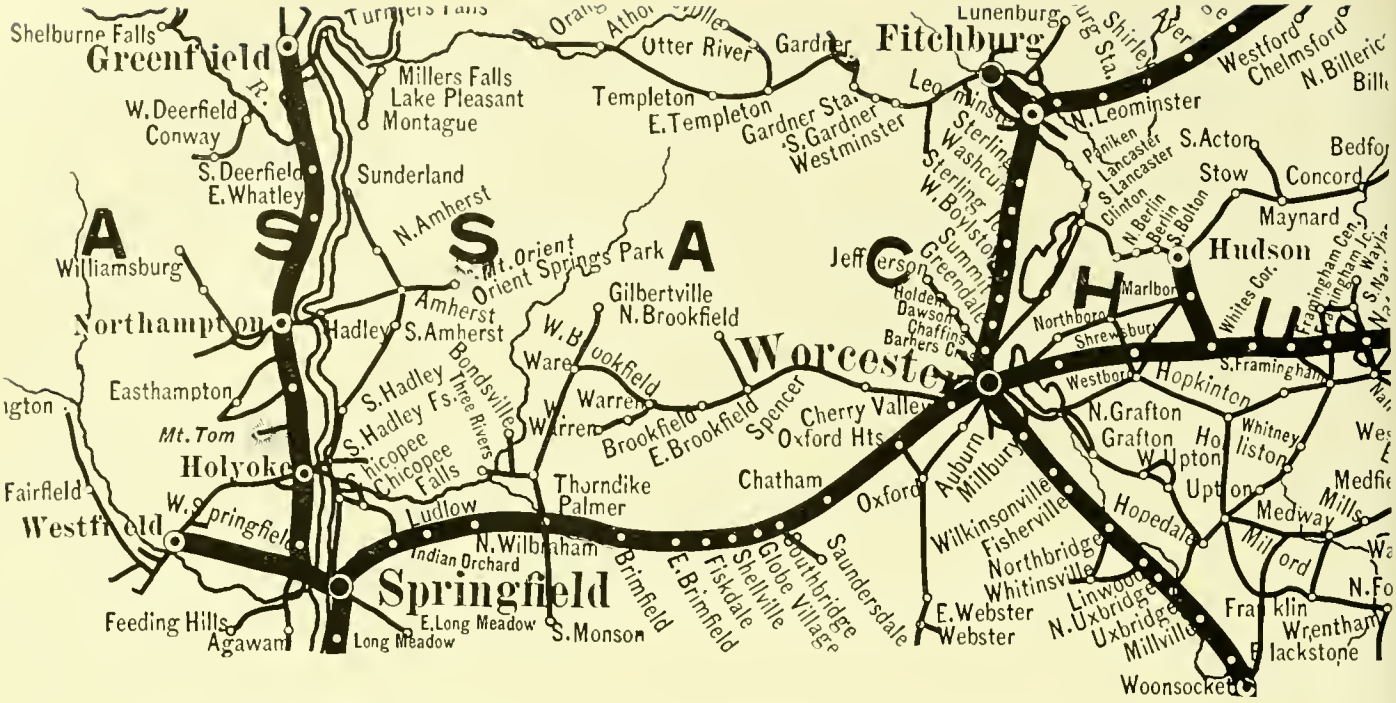
For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.

Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



LIMITED CARS. Between Worcester and Springfield without change, fare eighty cents. Leave either terminal 9.30 A. M. and 2.30 P. M. daily.

Through express cars leave Worcester daily 6.45 A. M. and every hour until 7.45 P. M. Leave Springfield 7.15 A. M. and every hour until 8.15 P. M.

Springfield to Boston with only one change of cars

WORCESTER CONSOLIDATED STREET RAILWAY COMPANY
SPRINGFIELD STREET RAILWAY COMPANY

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ONCE AN HOUR LIMITED

Limited Cars leave Worcester, City Hall and Union Station (daily except Sundays), at 7.05 A. M. and every 60 minutes until 5.05 P. M.

Leave Boston, Park Square, at 9.00 A. M. and every 60 minutes until 6.00 P. M.

Running time, one hour and fifty minutes, regular fares.

Round trip rates, One Dollar.

One way rates, Fifty-five cents.

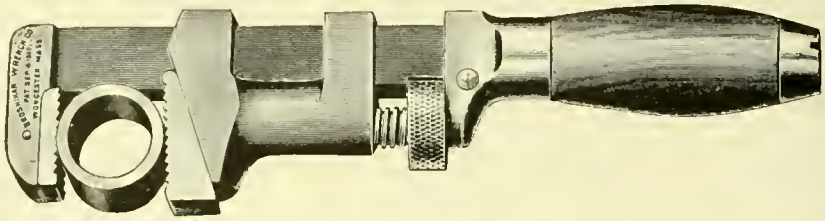
Local cars every thirty minutes.

Try the Clean, Comfortable, Fast Line. Lowest Fares.

BOSTON & WORCESTER STREET RAILWAY CO.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Look at the Wedge-Shaped Jaw



¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp*.

¶All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

That's what the

Carlton Engraving Co.

418 Main Street

at Worcester's Busiest Corner

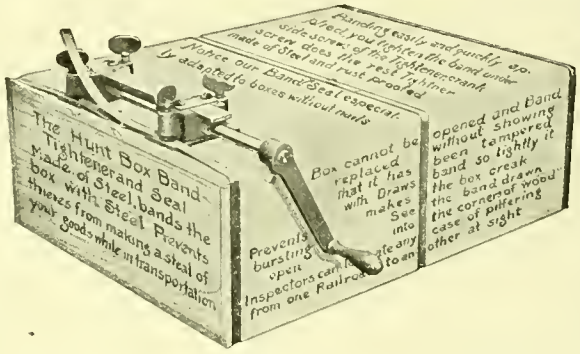
[illegible] YOU when in need of effective aids to your Advertising, be- [illegible] pecialize in the making of Halftones and Zinc Etchings, and [illegible]

Creative Department

[illegible] always [illegible] ervice for suggestions, sketches, drawings and photographs.

Satisfaction Assured

Put Your Bands on Tight



Patent Applied for.

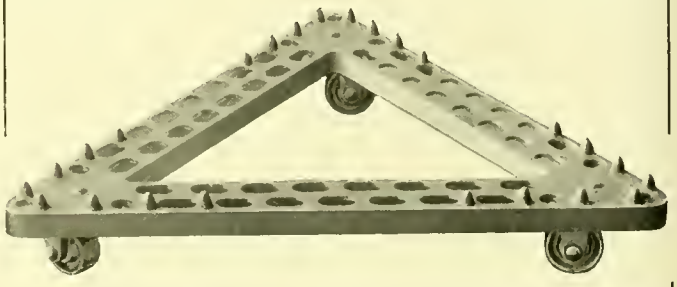
THE HUNT BOX BAND TIGHTENER AND SEAL

Preserves Package and Prevents Thieving.

GET ONE

The Hunt Truck

STRONG DURABLE



All parts made of steel. All wheels and casters have roller bearings

CAPACITY, 1000 POUNDS

Galvanizing Department: Our alloy, zinc with steel, process has no superior

Hunt Metal Corner Co.

23 E. Main St., Westboro, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ROYAL WORCESTER
CORSETS

Adjusto Style 608
Price $3

EVERY ROYAL WORCESTER Corset is an original conception designed upon correct lines, fashioned from the best materials with painstaking care by skilled workpeople, and emanates from one of the largest and most perfectly equipped corset plants in the world.

Unmistakably the ROYAL WORCESTER is the greatest corset value at a medium price. Anyone can well afford to buy and wear the ROYAL WORCESTER—it is the one sure way to solve all corset troubles.

Invariably, women who once wear

ROYAL WORCESTER CORSETS

become enthusiastic devotees to their favorite style and could not be induced to wear another kind.

Don't invest in a new gown until you procure a ROYAL WORCESTER over which to fit it. The diversity of styles and varying heights and lengths will enable you to do this with ease, and you will enjoy the utmost in style, fit, comfort and service.

Our assortment is complete, including all the new 1910 models. Coutil or batiste.

PRICES $1 TO $3

Style 633
Price 2.50

Model 906
Price $5

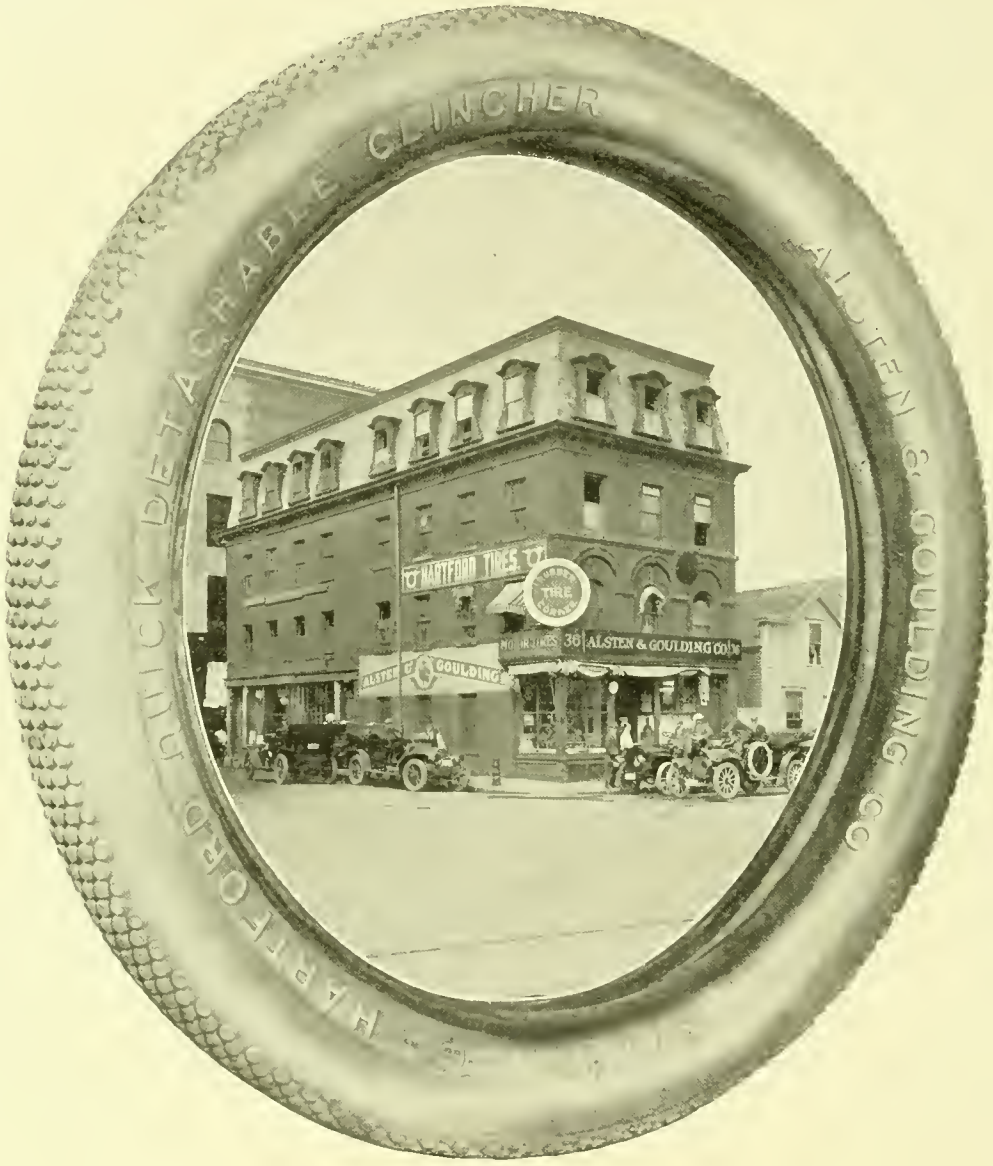
Style 504
Price $1.50

Also sole Worcester agents for BON TON Corsets, $3 to $15, and ADJUSTO Corsets, $3 and $5

BOSTON STORE
Denholm & McKay Co.

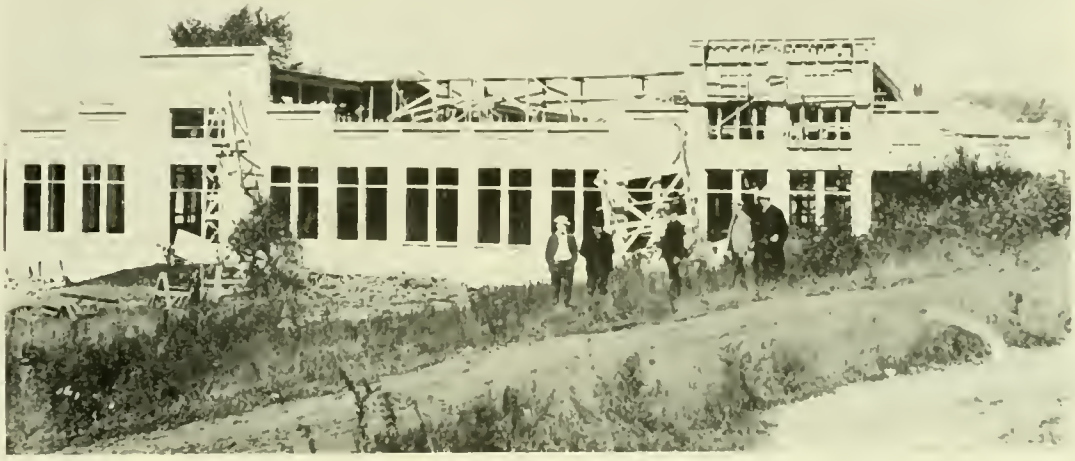
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MOTOR CAR ACCESSORIES



HEADQUARTERS FOR TIRES
VULCANIZING

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



REINFORCED CONCRETE BUILDINGS FOR FACTORY PURPOSES

Have many things in their favor. They are –

SANITARY
VERMIN PROOF
WARM IN WINTER—COOL IN SUMMER
INEXPENSIVE IN UPKEEP
NEGLIGIBLE INSURANCE RISK
FIRST COST IS LAST COST

But their real value depends on what sort of stuff goes into them. It may look like concrete, but is it? That depends upon the concern, and the man behind the mixer.

OUR AIM IS RELIABILITY

THE GEORGE W. CARR COMPANY

ENGINEERS (H. C. WILSON) CONTRACTORS

518 Main Street, Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

THE VACATION SEASON is at hand. No dwelling house or ordinary safe offers any real security against loss by fire or burglary. This is a good time to secure absolute protection and freedom from anxiety by enlisting the services of the Worcester Safe Deposit Vaults.

Valuables in trunks and boxes are entirely safe and free from corrosion in our vaults. This Company will call for trunks or other large cases, receipt for them at the house, and convey them to the vaults, where they will be registered and certificates of deposit forwarded by mail.

Entrance at the Left of Grand Stairway on the Street Floor

Worcester Safe Deposit Vaults (Incorporated)

WILLIAM D. LUEY, President
JOHN H. COES, Secretary
HALLECK BARTLETT, Treasurer

OFFICE HOURS
Daily from 9 A. M. to 4 P. M., except on Saturday
Saturday from 9 A. M. to 1 P. M.

State Mutual Building

340 Main Street — Worcester, Mass.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall

If Business is Poor

You need us to brace it up.

If Fair

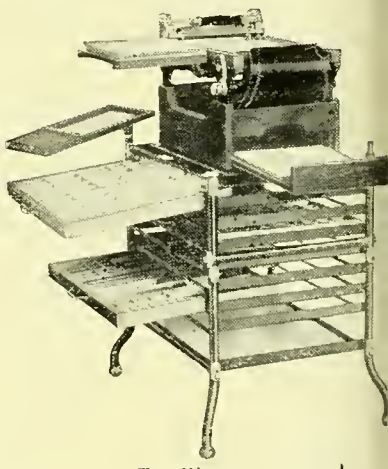
We can help you to make it better.

If First Rate

We can keep it so.

By our

WRITER-PRESS



THE WRITERPRESS

method of giving you exact copies of your typewritten letters, we are in shape to take RUSH orders, do them thoroughly, neatly and QUICKLY. We have type enough and forms enough to start and finish your work, right off, if you want it. Try us.

Post Cards

If your dealer has not some special post card you want, try us. We wholesale post cards to the trade, and have in stock all the time thousands of different cards, ranging in selling prices from 4 for 1c, 2 for 1c, 1c each, up to 10c, 25c, 50c and $1.00 each. Come and see our cards at No. 5 Green Lane, Worcester.

THE JONES SUPPLY CO.

Tel. 3364-3 — Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars

Ferrules and Sheet Metal Specialties

Case Hardening

Nickel, Copper and Brass Plating

also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

O. D. WHEELER, President — E. O. WHEELER, Treasurer

STORAGE, AUTO SUPPLIES, VULCANIZING
WOODWORK, FORGING

Expert Auto Repairing

MACHINE WORK OF ALL KINDS

D. A. BALDWIN COMPANY

Telephones 1203-1, 8242

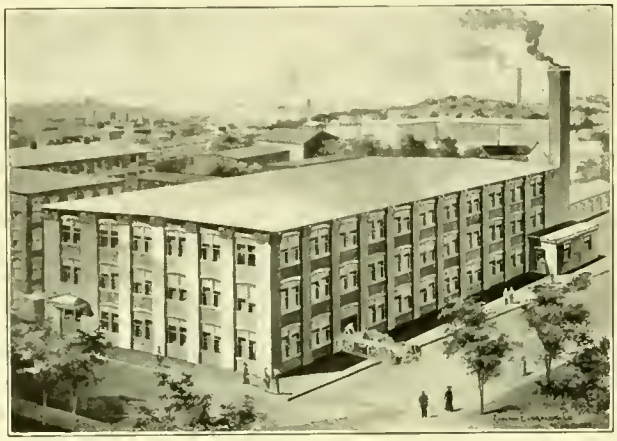
Oxy-Acetylene Welding Department

COMMONWEALTH MOTOR MART, 22 COMMERCIAL ST.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.



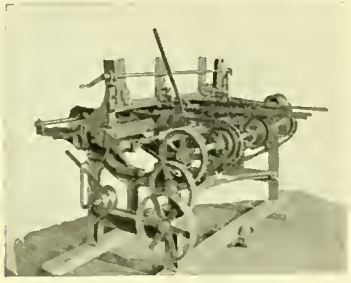
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



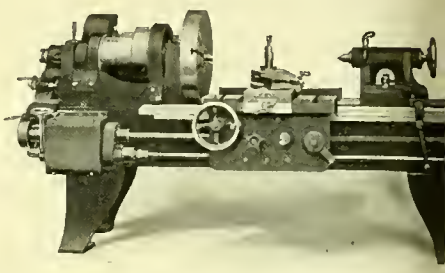
COMMERCIAL PHOTOGRAPHY.

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

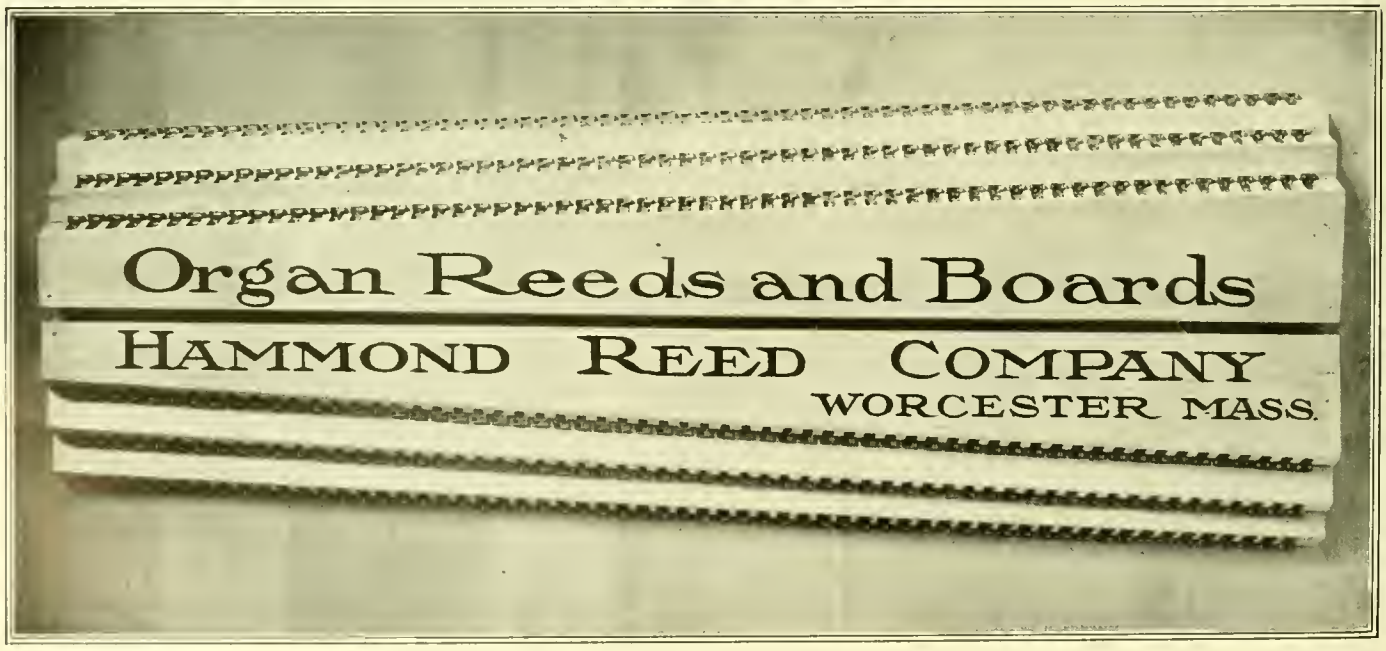


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all description

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*
Iroquois Bohemian Lager, *Frank Jones' Golden Ale*
and the
Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street
Telephone 2455 *Worcester, Mass.*

WE SHALL HAVE A LOT TO TELL YOU ABOUT NEW TYPE, NEW EQUIPMENT, ETC., IN THE *SEPTEMBER NUMBER*

WORCESTER MAILING COMPANY

GRACE L. BELKNAP, *Proprietor*

ROOM 704 STATE MUTUAL BLDG.

TELEPHONE 3480 WORCESTER

MODELING
WOOD CARVING

Models for Wood, Stone, Metal, Plaster, Cement

Architectural and Decorative Ornaments in Plaster, Papier-Maché and Composition

L. C. Hamill
94 Commercial Street
Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

Opposite City Hall Park

New Park Hotel

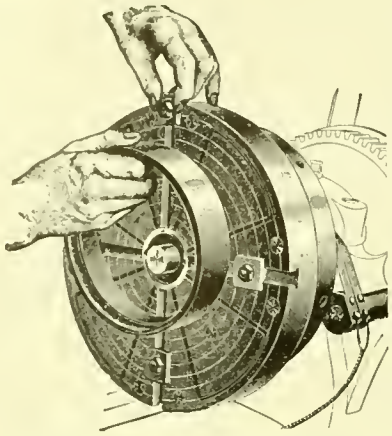
Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 **MASS.**

Made in Worcester.

BABY CARRIAGE
BICYCLE
CARRIAGE
MOTORCYCLE
AUTOMOBILE

TIRES

PRICES RIGHT

24 AUSTIN ST., WORCESTER TEL. 6239-2

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

TRADEMARK
NORTON
REGISTERED

Large returns result from unprejudiced investigation of grinding wheels.

Norton Wheels have turned expensive grinding methods into

Profitable Grinding Methods

The methods, of course, are important; but the kind of wheels in use is of prime importance.

Investigate by asking for "Norton" suggestions. What are your grinding conditions?

New York: 50 Church Street
Chicago: 11 North Jefferson Street
Niagara Falls: Alundum Plant

Norton Company
Worcester, Mass.

151

Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xxxii
Alsten & Goulding, auto supplies, xxiv
American Car Sprinkler Co., car sprinklers, v
American Foreign Trade Bureau, xiv
Baldwin Co., D. A. xxvii
Blake, Jr., & Co., George F., iron and steel, and supplies, xxix
Blanchard & Co., F. S., printers, Back cover
Boston & Worcester Railway, xxi
Bradley Car Works, xii
Brosnihan Wrench Co., xxii
Brownell, George L., twisting and spinning machinery xxxiv
Buck & Co., E. A., oils and gasoline, xvi
Carlton Engraving Co., xxii
Carr Co., George W., granolithic and concrete work, xxv
Central Supply Co., Cover
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Press, printers,
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, xxviii
DeLong, W. H., dental disks, xxxii
Golbert Last Company, Cover
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxviii
Hamill, L. C., xxx
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxx
Heywood Boot & Shoe Co., fine shoes, ii
Higgins Co., R. H., Stearns Cars, xxxiii
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Howard Bros. Mfg. Co., xxiv
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xxxii
Hunt Metal Corner Co., xxii
Jones Supply Co., Writerpress, xxvi
Jackson St. Foundry, iron castings, xxvii
Kidder, R. E., drawing tables, v
Luce, E. B., commercial photographer, xxviii
Morgan Construction Co., rolling mill equipment, iv
Mosher Real Estate Co., xviii
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxvii
Multiple Woven Hose & Rubber Co., fire hose and belting, xxxiv
New England Anchor Fence Co., ii
New England Audit Co., xi
N. E. Motor Supply Co., xxxvii
New Park Hotel, xxxi
Norcross Brothers Co., contractors and builders, iii
Norton Company, grinding wheels, xxxiii
Norton Grinding Co., grinding machines, xix
O'Connell Real Estate Co., xiv
People's Savings Bank, x
Pond Machine & Foundry Co., xxvii
Powers Company, F. E., coal, xix
Pratt & Inman, iron and steel, xxix
Prentice Bros. Company, drilling machines, engine lathes xvii
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Royal Worcester Corset Co., xxiii
Spencer Wire Co., wire and wire articles, wire fences, vii
Springfield Street Railway Company, xx
Standard Foundry Co., iron castings, xxvii
Standard Mfg. Co., vii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, xxi
Stone & Foster Lumber Co., xxix
United States Envelope Co., xii
Union Water Meter Co., water meters, i
Walker & Co., O. S., chucks, xxxii
Warren Hotel, The, xxxi
Warren, J. F. & W. H., leather belting and mill supplies, xxvii
Wheaton & Bowers, photo supplies, viii
Wheelock Fence Company, viii
White & Bagley, machine and auto oils, Back cover-xiii
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxxiv
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xxxiii
Wire Goods Co., wire hardware, Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xxxi
Wood Lumber Co., P. W.,
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xxvi
Worcester Machine Screw Co., set, cap and machine screws, xxxiii
Worcester Mailing Company, xxxvi
Worcester National Bank, iv
Worcester Safe Deposit Vaults, xxvi
Wright Co., M. S., vacuum cleaners, xvii
Wright Wire Co., wire and wire cloth, wire rope, etc. i
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made In Worcester.

G. L. Brownell,

Builder of

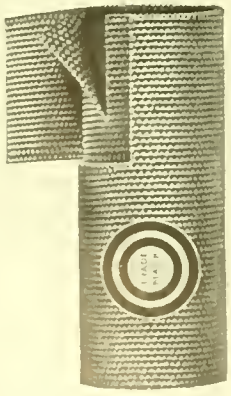
IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts

Please address Station A.

Made in Worcester.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made In Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

WHY DO YOU INSURE?

SOME MEN do not. But you are not one of them. You insure your life, your home, your factory—and so on down the line. *BUT*—do you insure your printing? When you give an order for a catalogue, is there any assurance that it will be a satisfactory job? You may have wondered why Blanchard's price was a trifle higher than the quotation from Slap-Dash & Co. The difference was the price of insurance. It was the margin of safety. Why take a long chance at getting a good job at a cut price when you are absolutely assured of the best work at our quotations? Give us your printing and get it off your mind. We will do all the worrying.

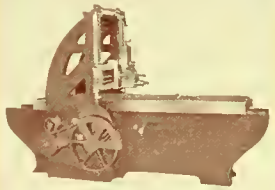
THE BLANCHARD PRESS WORCESTER, MASS.

MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN CONSTRUCTION COMPANY

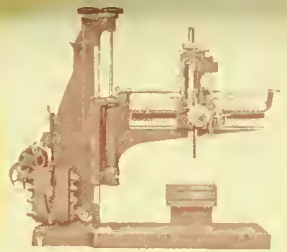
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES

PRENTICE BROS. CO.

WOODWARD & POWELL PLANER CO.

SLATER BLDG.

"WORCESTER-MADE" INVITES TRADE

THE GRATON & KNIGHT MFG. CO.

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

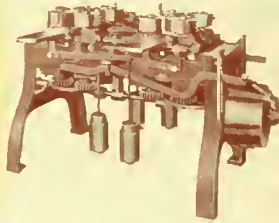
ORGAN REEDS
HAMMOND REED COMPANY

FOR ALL MOTOR CARS

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

PROPOSED NEW UNION STATION

CITY HALL

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

GOVERNMENT BLDG.

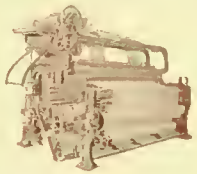
Golbert Last Co.

"BI-MOORE" BEST HOSE

MULTIPLE WOVEN HOSE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

HILL DRYER CO.

GOOD ENVELOPES

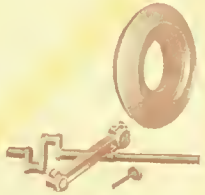
UNITED STATES ENVELOPE CO.

ART
NOVELTIES
VALENTINES

THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES

NORTON GRINDING CO.



The WYMAN & GORDON CO.
DROP FORGINGS

O. S. WALKER & CO.

SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.

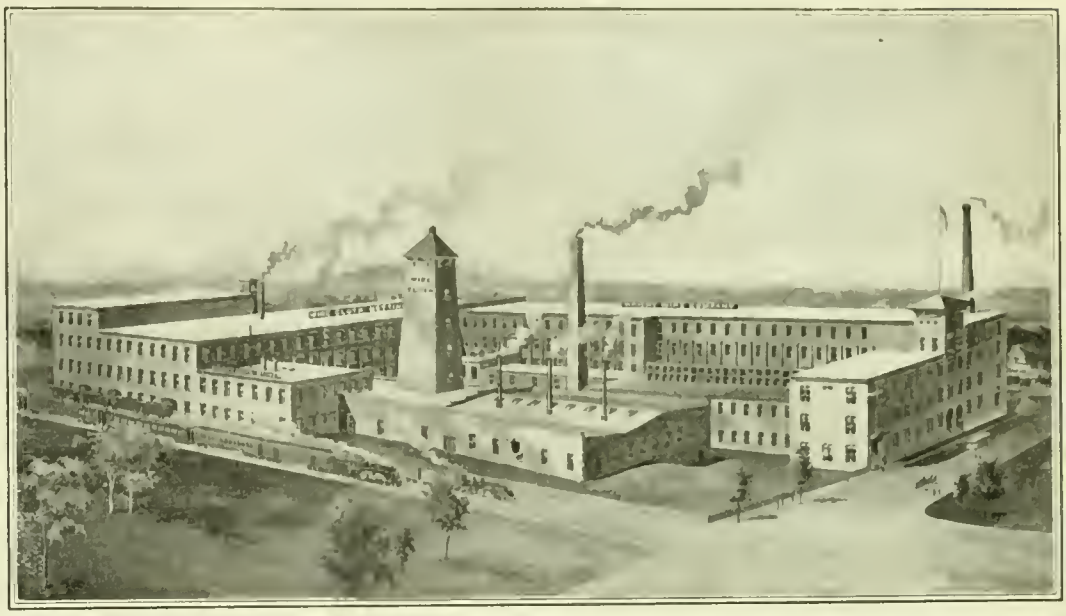
Everything in Wire

TRADE Q MARK

The Wire Goods Co.

WIRE

Wire Cloth
Picture Cord
Coal and Sand
Screens
Foundry Riddles
Wire Rope and Cable
Poultry Netting
Elevator Cabs
and Enclosures
Flower Bed Guard
Trellis and
Ornamental Fencing



WORCESTER FACTORY

WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.

High Grade Shoes for Men

HEYWOOD TRADE MARK SHOE 1864

Factory and Main Office
70 Winter St., Worcester, Mass.

New York Office
127 Duane St., New York City

Retail Store
415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer
Buenes Aires, Argentine Republic

Patterson & Ruhfus
Melbourne and Sydney, Australia

HEYWOOD TRADE MARK SHOE 1864

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

BOSTON SAFE DEPOSIT & TRUST CO. BUILDING, Boston, Mass.
Shepley, Rutan & Coolidge — Architects
The Norcross Brothers Co. — Builders

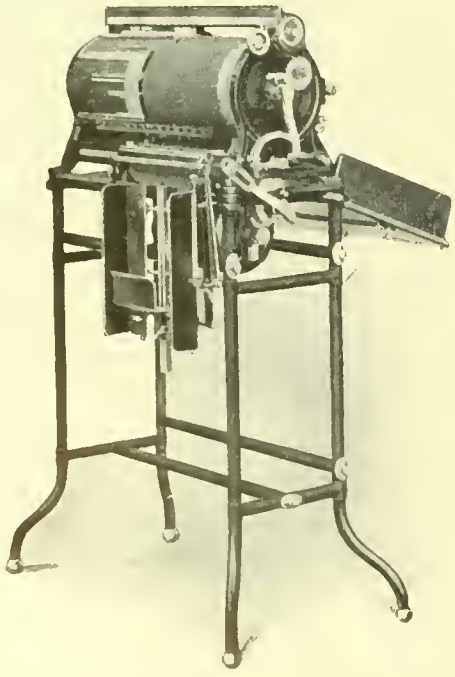
THE NORCROSS BROTHERS COMPANY

General Contractors and Builders

WORCESTER, MASS.

NEW YORK BOSTON
PROVIDENCE WASHINGTON

My business has increased to such an extent that for the third time I am moving into larger quarters, where I shall be pleased to greet old friends and make new customers.



When you have MULTIGRAPHING or TYPEWRITING to do, bring it to me and I will give you the BEST.

We have lately added a typewriter with the Wahl Adding and Subtracting Attachment. With the large carriage on this machine I can typewrite manuscript 18 inches wide, and give absolutely correct results where mathematical calculations are required.

I have PICA and ELITE multigraphs and typewriters to match for filling in letters.

We pay special attention to RUSH and OUT-OF-TOWN ORDERS.

WORCESTER MAILING COMPANY

GRACE L. BELKNAP, Proprietor

530 STATE MUTUAL BUILDING

Agent for American Multigraph Sales Co. Multigraph Ribbons and Supplies.
Typewriter Ribbons and Supplies.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910, $34,681,951.04
Liabilities, Jan. 1, 1910, $31,584,938.72
Surplus, Jan. 1, 1910, $3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester Massachusetts

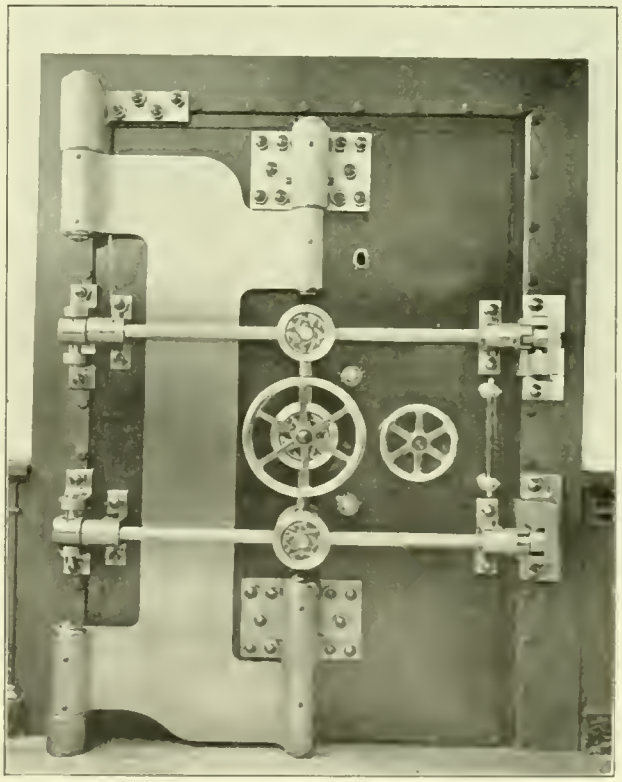
Safe Deposit Department
of the

Worcester National Bank

11 Foster Street

No one can afford to be without the protection of a Safe Deposit Box. Our SAFE DEPOSIT DEPARTMENT, *on the ground floor*, is light and accessible and our vaults are of the most modern construction.

Boxes $4 per annum and upwards

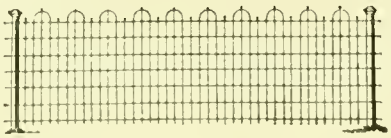


YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

The Commonwealth Press
OLIVER B. WOOD
WORCESTER
MASS.

Printing craft can accomplish nothing finer than the catalogs and booklets which go forth bearing our stamp.

If you have done business with us you know this to be true. If you have not, why don't you give us an opportunity to "show you"?

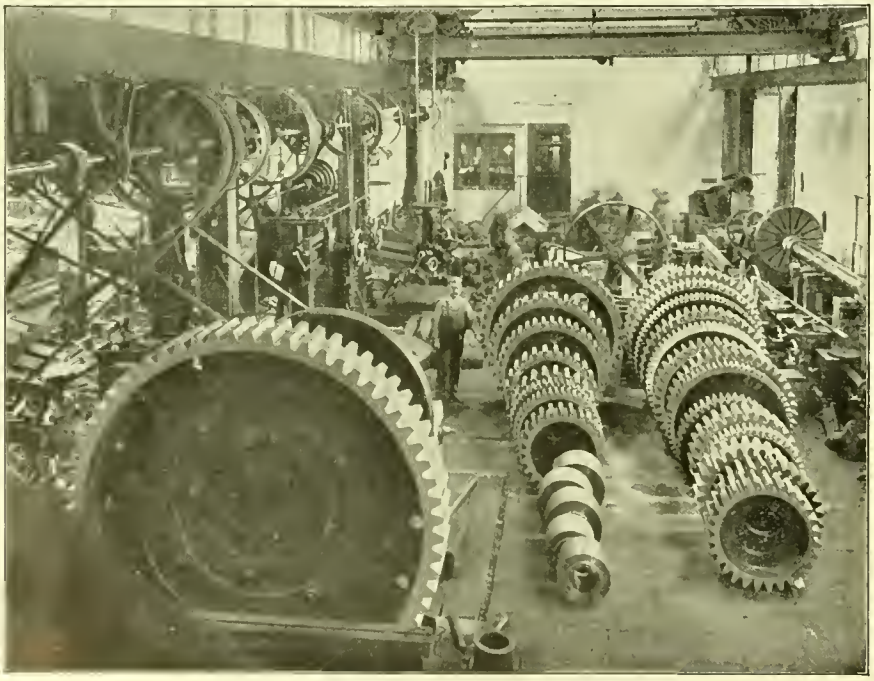
New Englanders are the most fastidious business men in the world. We have been pleasing them for nearly 30 years.

This is a fair test.

Commonwealth Press

Oliver B. Wood

50 Foster Street, Worcester, Mass.



GEAR PLANING—BEVEL, SPUR AND SPIRAL GEARS

CONTINUOUS ROLLING MILLS for Billets, Merchant Bar, Small Structural Shapes, Skelp, Hoop, Cotton Tie and Wire Rods

CONTINUOUS GAS PRODUCERS

CONTINUOUS HEATING FURNACES

DYBLIE REVERSING VALVES

WIRE DRAWING PLANTS complete

52 Rue du Congres
Brussels, Belgium

MORGAN CONSTRUCTION COMPANY

WORCESTER
MASSACHUSETTS

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

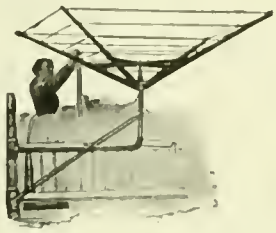
Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.



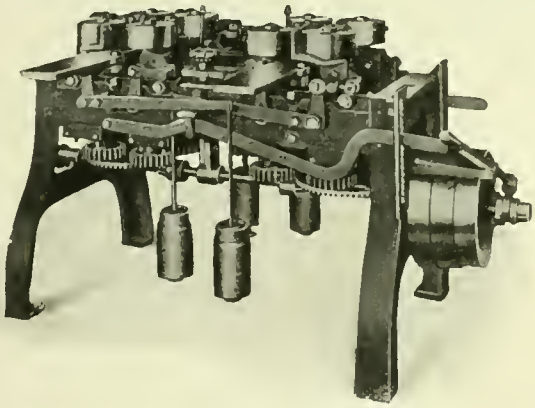
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

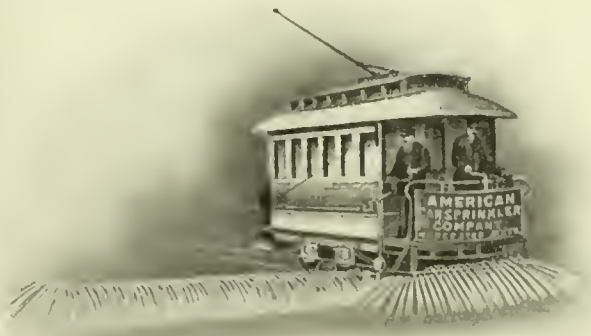
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



AMERICAN CAR SPRINKLER CO.

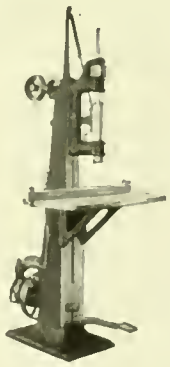
WORCESTER, MASS., U. S. A.

Made in Worcester.

Found at Last!

A boring machine for wood built on the right principle. Workmanship and material the best. New features.

Send for circular.



R. E. KIDDER

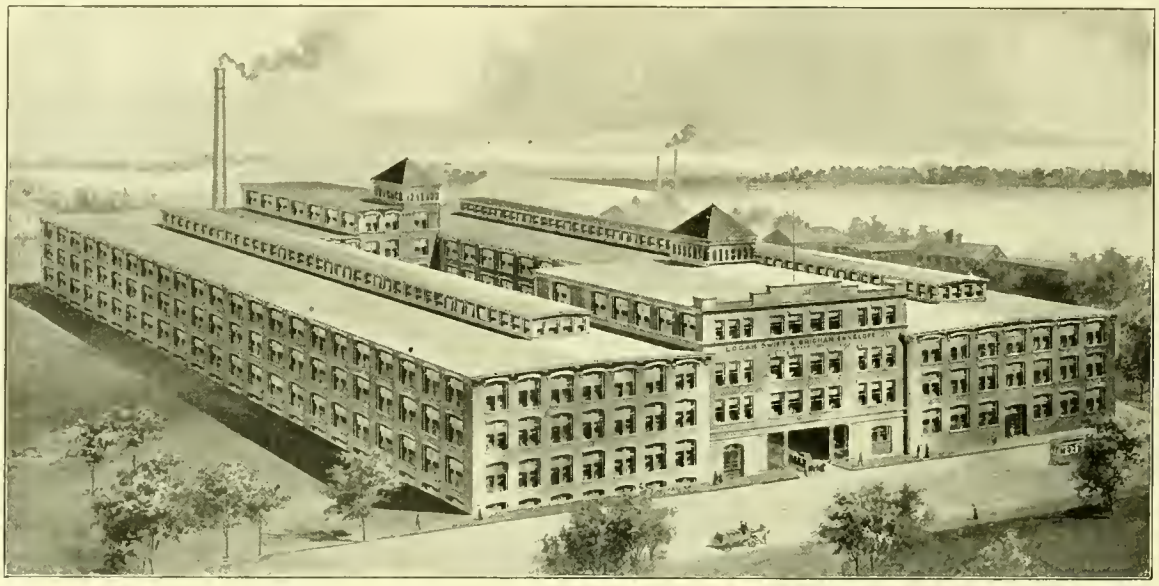
13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

United States Envelope Co.

Manufacturers of Standard ENVELOPES



THE OUTLOOK ENVELOPE insures economy and absolute accuracy in the addressing of all your mail matter. The Improved COLUMBIAN CLASP ENVELOPE. The best and most satisfactory merchandise envelope made. Specialists in Steel Die Stamping or Commercial Work. Samples and prices of our standard goods furnished by your stationer or printer. Made in Worcester.

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing, Hand Stripping Cards, German and Domestic Heddles

for Cotton, Woolen and Worsted Mills

Revolving Top Flats
remounted
Fillets redrawn

QUALITY is our
Inducement

Phone 1070
Local and Long Distance

Dept. C-11
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

1909

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

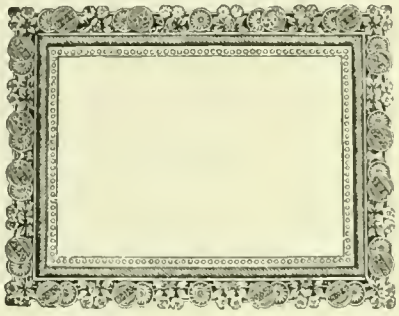
REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

ANSON F. RIX

PICTURE FRAMES

WHOLESALE AND RETAIL



1 Green Lane WORCESTER, MASS.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Highest Awards at

Louisiana Purchase Exposition,
St. Louis, Mo., 1904,

Lewis & Clark Centennial Exposition,
Portland, Ore., 1905,

Jamestown Tercentennial Exposition,
Jamestown, 1907,

Alaska-Yukon-Pacific Exposition,
Seattle, 1909,

are among the honors that have come to Graton & Knight Mfg. Co.'s products.

Other and really higher honors are daily accorded "G & K" products in the thousands of plants which profit now, and have for years profited, from the use of them.

The pith of these honors is readily attributed to "genuine merit."

For prices and particulars concerning leather, leather belting, lace leather, strapping, shoe counters, insoles, etc., address:—

The Graton & Knight Mfg. Co.,
Worcester, Mass.

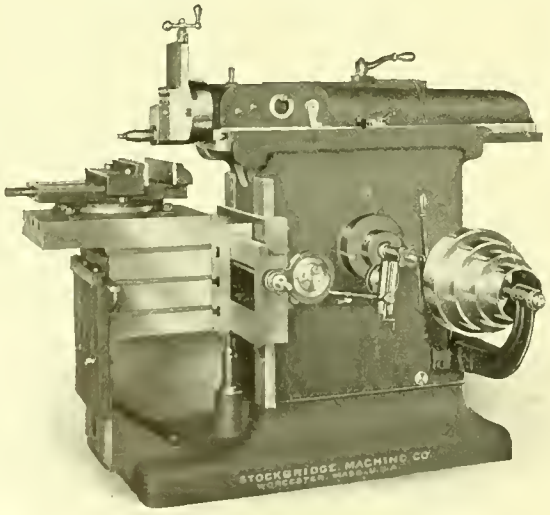
BRANCHES

ATLANTA, GA., 93-95 Forsyth St.
BOSTON, MASS., 33 Lincoln St.
CHICAGO, ILL., 165 E. Lake St.
MILWAUKEE, WIS., 103 W. Water St.
MINNEAPOLIS, MINN., 310 Third Ave., No.
NEW YORK, N. Y., 72 Warren St.
PHILADELPHIA, PA., 132 N. Third St.
PORTLAND, ORE., 51 First St
SAN FRANCISCO, CAL. 30-32 Fremont St.
SEATTLE, WASH., 219 Occidental Ave.
ST. LOUIS, MO., 619 N. 8th St.

Selling Agents for Texas,
GRATON & KNIGHT MFG. CO. OF TEXAS,
141 N. Austin St., Dallas, Texas.

STOCKBRIDGE SHAPERS

MADE IN WORCESTER



24" STOCKBRIDGE SHAPER

Worcester made tools are recognized the world over as unexcelled in workmanship. Stockbridge Shapers combine good workmanship with SPECIAL FEATURES in construction, our patented Two-Piece Crank Motion producing economies in operation that no prospective purchaser of a shaper can afford to overlook.

STOCKBRIDGE MACHINE CO.

Worcester, Mass., U. S. A.

WHEELOCK RUST PROOF FENCE, CITY HALL PLAZA

The reputation of the **Wheelock "Rust Proof" Fence** has been established by years of consistent advertising and careful supervision of manufacture. Standard for Strength, Stability and Symmetry. Galvanized after weaving, and guaranteed rust proof.

Be sure you get **Wheelock Fences, Flower Bed Guards, Tree Protectors and Trellises.**

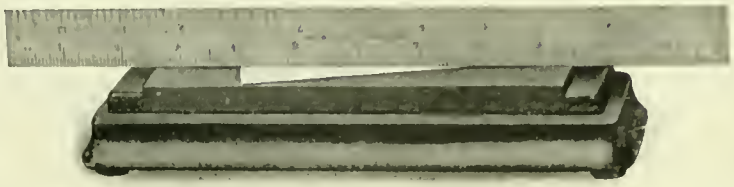
This Name Guarantees Satisfaction

Wheelock Rust Proof Fence Co.

Slater Bldg., Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

TRADEMARK
NORTON
REGISTERED



Here is a sample of the lasting quality of India Oil Stones.

From five to twelve engravers used this stone for more than three years in the plant of Suffolk Engraving & Electrotyping Company, Boston. The tools sharpened on it were used for cutting steel, brass or embossing dies, zinc for line plates, copper for halftones and for wood-engraving.

The rule and the sheet of paper in the photograph show the amount of wear.

India Oil Stones are made in 64 shapes and sizes - coarse, fine, medium and combination. They meet all sharpening stone requirements.

They cut fast and last a long time.

Selling Agents for India Oil Stones

PIKE MANUFACTURING COMPANY

PIKE, N. H.

MADE BY

NORTON COMPANY

WORCESTER, MASS.

Manufacturers of Norton Grinding Wheels — Norton Glass Cutting Wheels — Norton Razor Hones— Sharpening Stones in large variety.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

FIRE BRICK

and

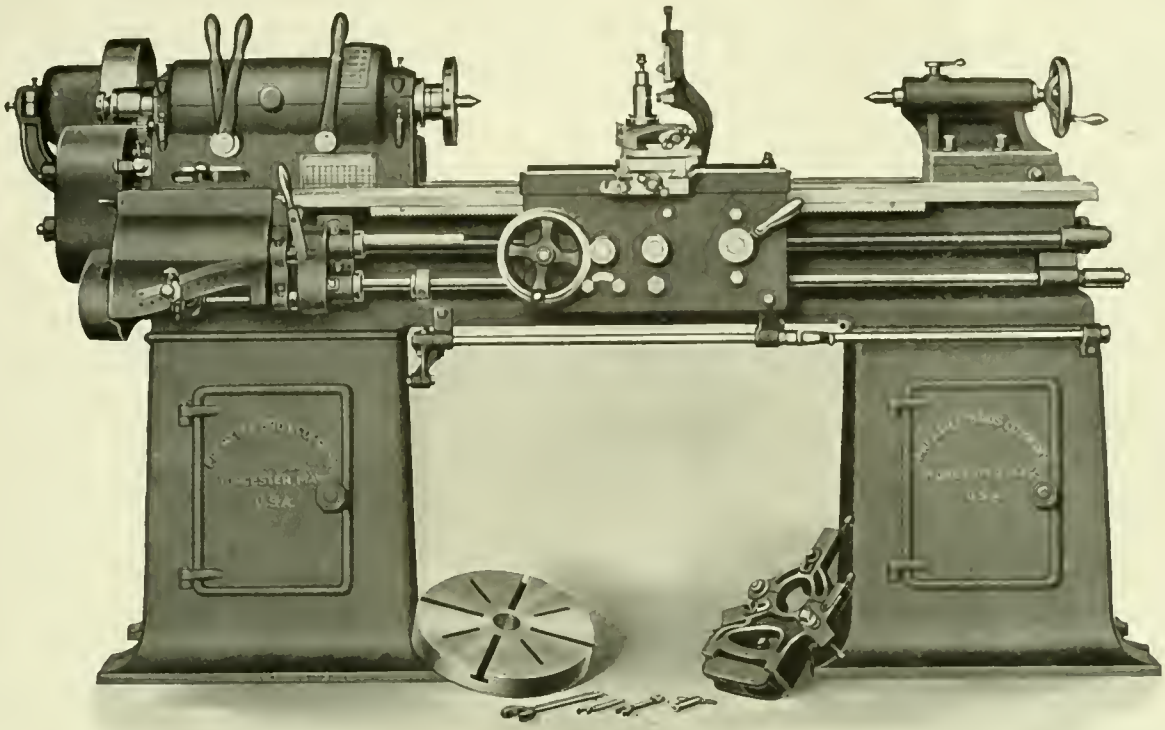
FIRE CLAY

B. F. MARSH

Cement, Lime, Expanded Metal, Wall Plaster

22 GARDEN STREET - - WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

ery man who takes pride in his personal appearance wants to keep his hair.

Now that you have tested tonics and washes won't you try a little applied intelligence, born of twenty years experience with hair troubles?

A. E. FENLEY

741 SLATER BUILDING WORCESTER, MASS.

IS YOUR ROOF ON TIGHT?

THE GEORGE W. CARR CO.
(H. C. WILSON)

ENGINEERS AND CONTRACTORS

"BARRETT SPECIFICATION"
(For Tar and Gravel Roofs)
Send for our Booklet on the subject.

WORCESTER

September and October are ideal months for making your roofs ready for Winter's storms.

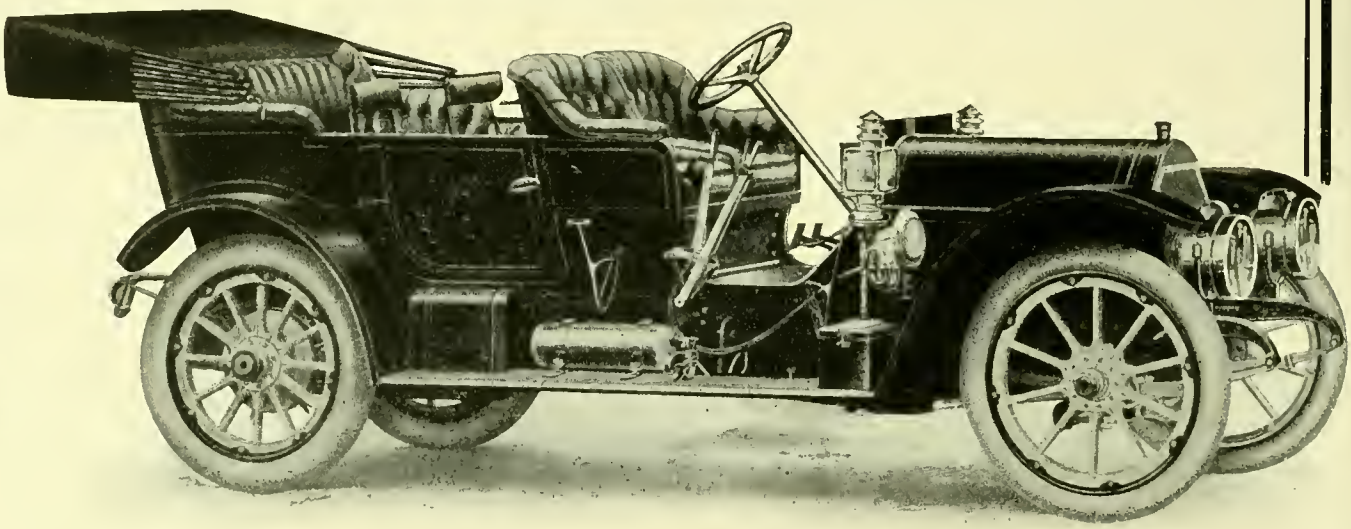
YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE WHITE LINE RADIATOR BELONGS TO THE STEARNS

Stearns

Motor Cars

FULLY EQUIPPED WITH CONTINENTAL TIRES AND DEMOUNTABLE RIMS



30-60 H. P. SEVEN-PASSENGER TOURING CAR

Standard type of touring car — Removable tonneau seats — Either shaft or chain drive

R. H. HIGGINS COMPANY

96 Commercial Street, Worcester, Massachusetts

PHONE 2171

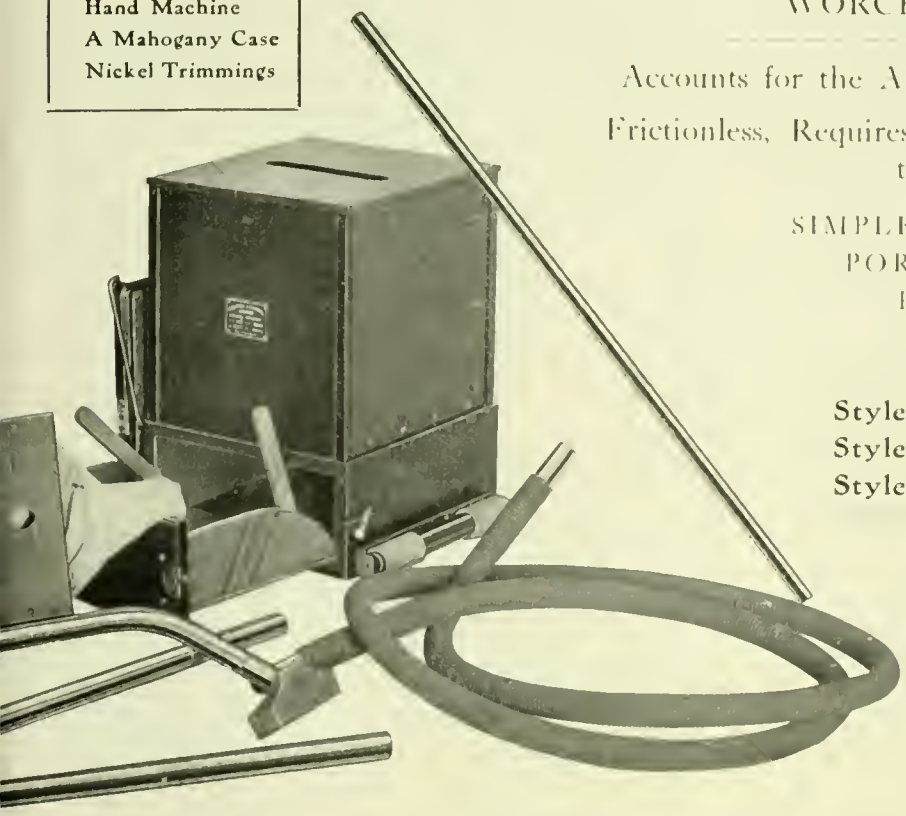
Demonstrations upon request

WE ARE WORCESTER COUNTY HEADQUARTERS FOR CONTINENTAL TIRES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

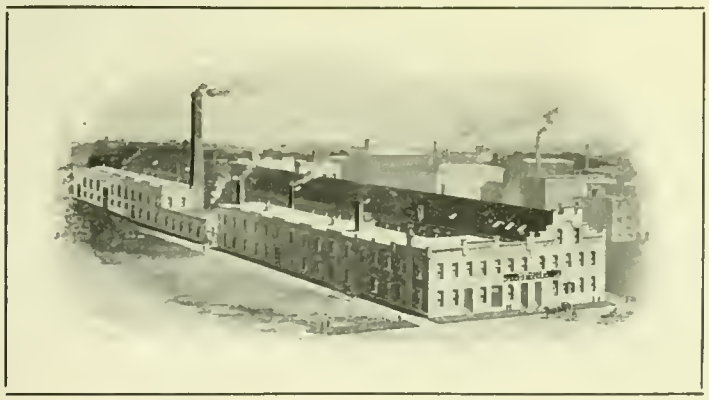
SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.
Manufacturers
Worcester

Pneuvac Company
Blake Building
Boston, Mass.



Worcester Machine Screw Co.

Branch of the

Standard Screw Company

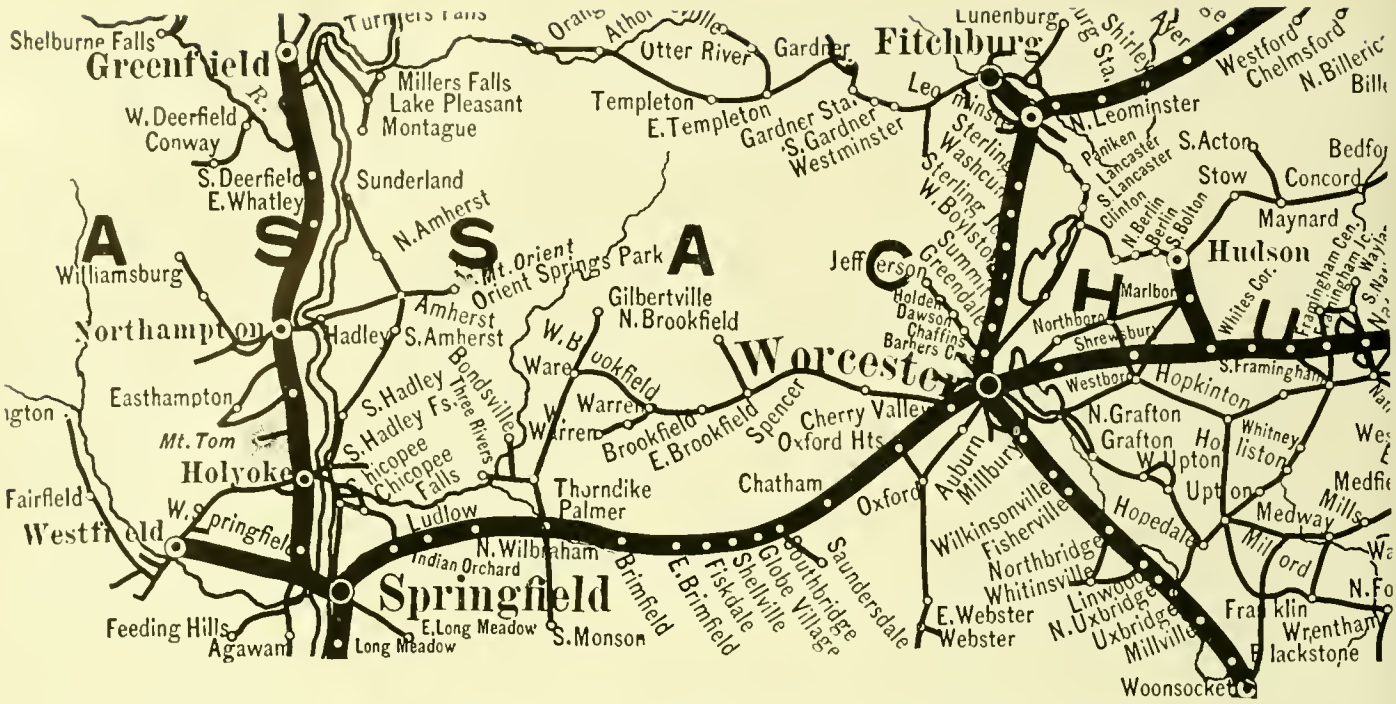
Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



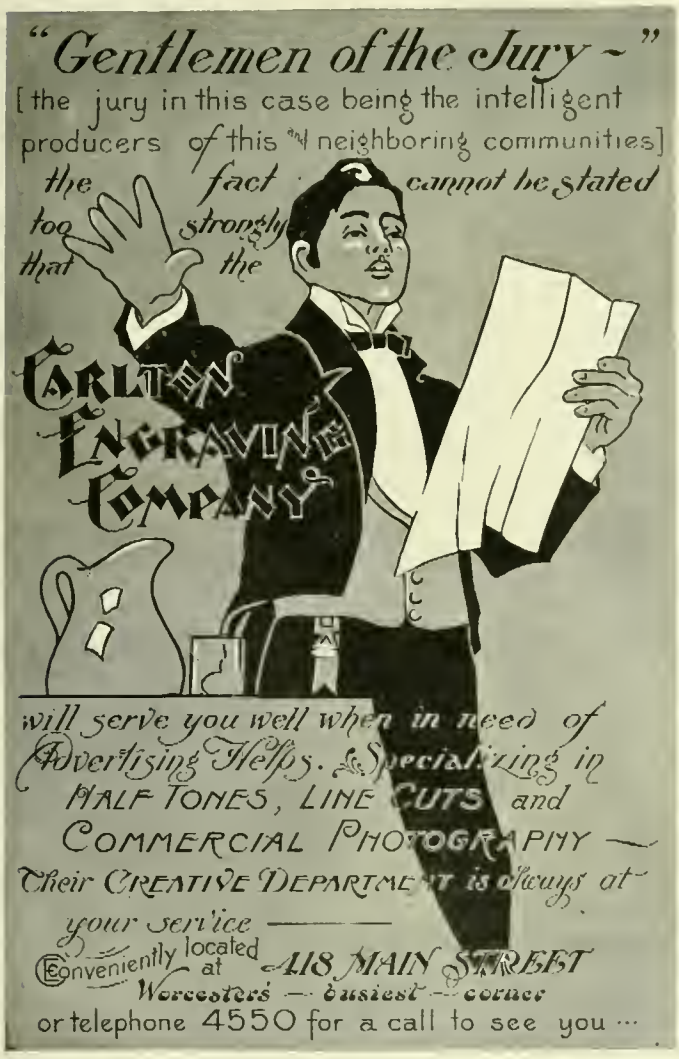
LIMITED CARS. Between Worcester and Springfield without change, fare eighty cents. Leave either terminal 9.30 A. M. and 2.30 P. M. daily.

Through express cars leave Worcester daily 6.45 A. M. and every hour until 7.45 P. M. Leave Springfield 7.15 A. M. and every hour until 8.15 P. M.

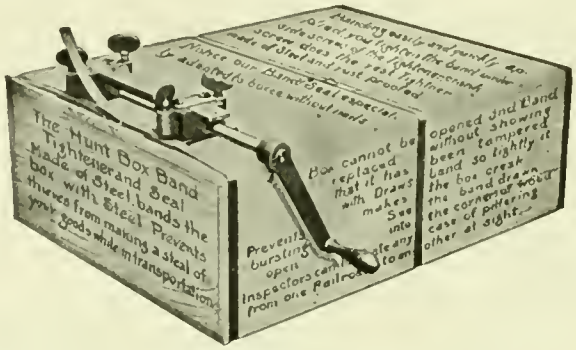
Springfield to Boston with only one change of cars

WORCESTER CONSOLIDATED STREET RAILWAY COMPANY
SPRINGFIELD STREET RAILWAY COMPANY

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



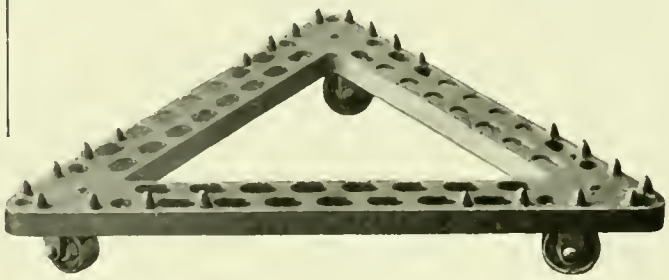
Put Your Bands on Tight



Patent Applied for.
THE HUNT BOX BAND TIGHTENER AND SEAL
Preserves Package and Prevents Thieving.
GET ONE

The Hunt Truck

STRONG DURABLE



All parts made of steel. All wheels and casters have roller bearings

CAPACITY, 1000 POUNDS

Galvanizing Department: Our alloy, zinc with steel, process has no superior

Hunt Metal Corner Co.

23 E. Main St., Westboro, Mass.

P. W. WOOD LUMBER CO.

WHOLESALE and RETAIL

GARDEN STREET

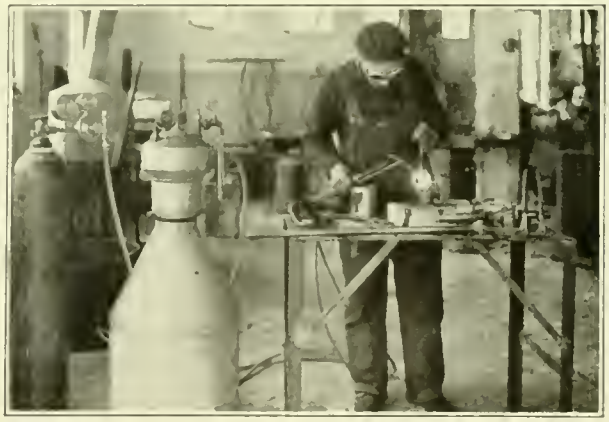
WORCESTER, - - MASS.

Telephone 4720-4721

We use Southard's Telegraph Code.

COMMONWEALTH MOTOR MART

22 COMMERCIAL ST.



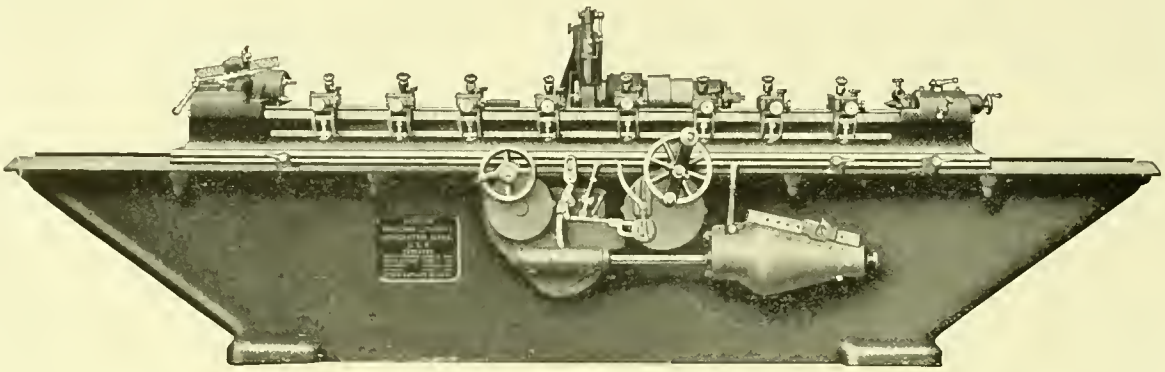
EXPERT AUTO REPAIRING

Storage

E. O. WHEELER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Norton Grinders



When you purchase a NORTON GRINDER you purchase MORE than the machine itself. You purchase the solution to your grinding problems—the certainty of an increased output—decreased expenses—a higher standard and greater accuracy of work—and thorough satisfaction in every particular.

NORTON GRINDERS have to pass OUR inspection before we allow YOU to put them to test. All details are carefully inspected step by step during the course of construction and finally the completed machine is put through a rigid examination.

NORTON GRINDERS are built with FIXED WHEEL BASE AND MOVING WORK TABLE. The Grinding Wheel is rigidly supported by the entire base of the machine. All revolving parts are accurately ground and plain bearings are scraped to master straight edges.

AGENTS

Vonnegut Hardware Co.
Indianapolis

Prentiss Tool & Supply Co.
New York, Boston, Buffalo, Syracuse

Henshaw Bulkley & Co.
San Francisco, Los Angeles

Robinson, Carey & Sands Co.
St. Paul and Duluth

Motch & Merryweather Mchy. Co.
Cleveland, Detroit and Cincinnati

Alfred Herbert, Ltd.
Coventry, Eng.

Manning, Maxwell & Moore
Pittsburg, St. Louis, Philadelphia, Atlanta

The Canadian Fairbanks Co.
Montreal, Toronto, Vancouver

F. W. Horne
Yokohama, Japan

Norton Grinding Company

Worcester, Massachusetts

Chicago Store: 11 North Jefferson Street

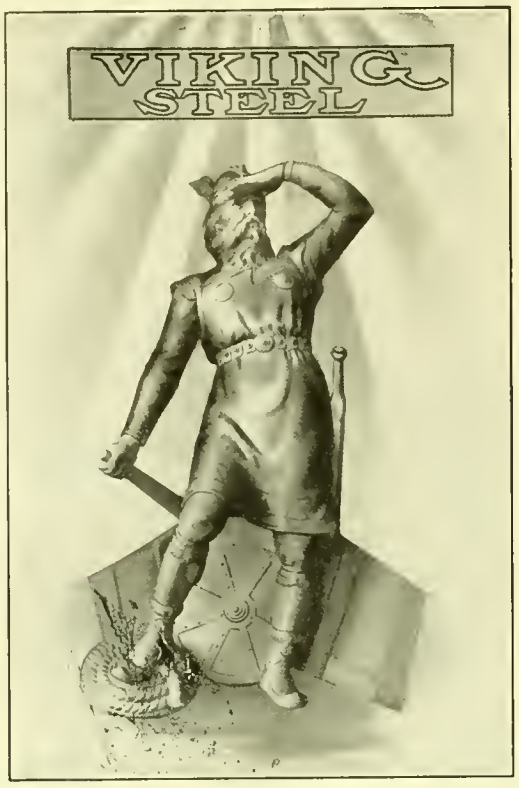
41 N

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE--yourself, the advertiser and the publication.

MOTOR CAR ACCESSORIES

HEADQUARTERS FOR TIRES
VULCANIZING

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL. LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THERE is a subtle charm and grace about all

BON TON
CORSETS

which appeals to your finer tastes and excites your admiration and fancy. BON TON Corsets are *absolutely without a rival*, each model an original conception of surpassing excellence in every detail. Batiste or coutil.

PRICES $3 to $15

BOSTON STORE
Denholm & McKay Co.

ALSO SOLE WORCESTER AGENTS FOR

Royal Worcester Corsets $1 to $3
and Adjusto Corsets $3 and $5

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems Go Ahead Methods

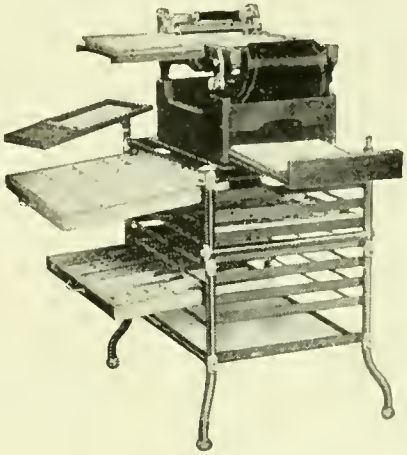
Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall



Few business men know what the Writerpress will do

¶Most business men do know that properly executed facsimile letters constitute a tremendous business producing force.

¶**WE** can make the Writerpress produce absolutely undetectable duplicates of a personally type-written letter or circular. We can handle your order in ANY quantity, the cost is small and we guarantee the work. We give your letters that **personal tone and appearance** which appeals instantly to the reader.

Special Trial Offer

¶In order to get acquainted and show you the quality of our work, we will, on your first order, duplicate 1000 one-page letters of not more than 25 lines, on a good quality bond paper, letter head size, for only $3.50.

The Jones Supply Company

Telephone 3364-3

306 Main Street, Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

FRANK P. MOSHER

GENERAL CONTRACTOR AND BUILDER

Excavating of all kinds — Concrete and Granolithic Work

Three-deckers a specialty

I am the originator of "own your home on easy payments." If you want to buy or build, call and see me. Money to loan. Permanent and construction mortgages.

ROOM 737 SLATER BUILDING
WORCESTER, MASSACHUSETTS
TELEPHONE 1705

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

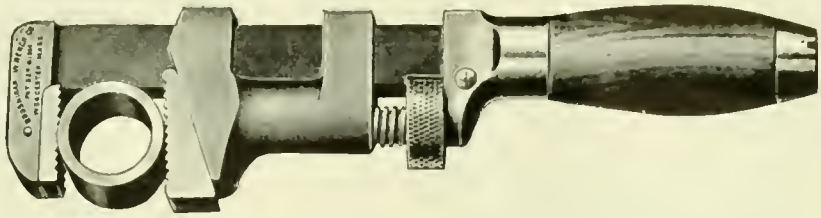
F. E. POWERS CO. — WORCESTER, MASS.

Offices 570 Main Street — Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Look at the Wedge-Shaped Jaw



¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp*.

¶All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

HOTEL STANDISH

WORCESTER, MASS.

NEW AND ATTRACTIVE

Permanent and transient guests accommodated
On direct route between Boston and New York. First-class garage nearby.
Rooms with or without baths.

Inquire for rates.

R. L. PRENTICE, *Proprietor* — J. McWALTER, *Manager*

AUTO COATS
NORFOLK SUITS
FINE WOOLENS

GAMBS BROTHERS

MERCHANT TAILORS

Room 21 — 44 FRONT STREET

WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MERCHANTS NATIONAL BANK

WORCESTER, MASS.

SAFE DEPOSIT BOXES

FOREIGN EXCHANGE
ACCOUNTS SOLICITED

F. A. DRURY, President
C. A. EVANS, Vice-President
A. G. DAVIS, Cashier
C. S. PUTNAM, Assistant Cashier

LEE, HIGGINSON & CO.

INVESTMENT SECURITIES

338 MAIN ST., WORCESTER, MASS.

When you want an expert Book-keeper or Stenographer—Call up

TYLER'S BUSINESS COLLEGE

which thoroughly trains young people to perform properly and successfully the work required in business life. Hundreds of our students are now in good positions in Worcester, and there is an increasing demand for others as competent. . . . . .

Multigraphing a Specialty

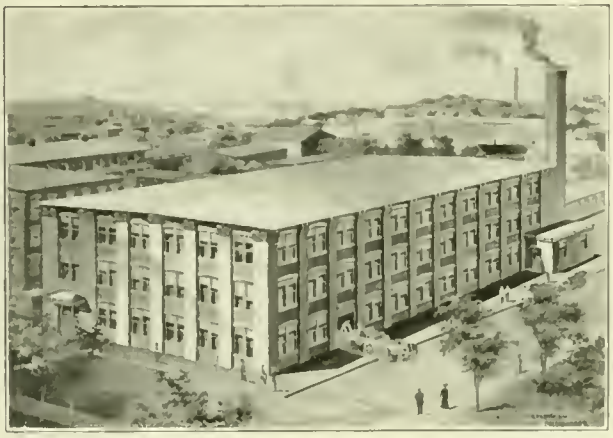
EDNA I. TYLER, Principal.
Telephones 5012-6337.

SLATER BUILDING
Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.



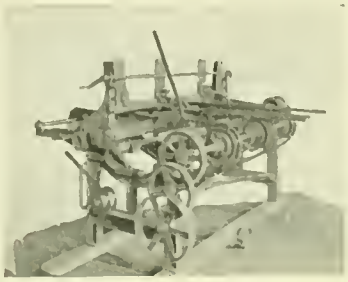
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

*Made in Worcester.



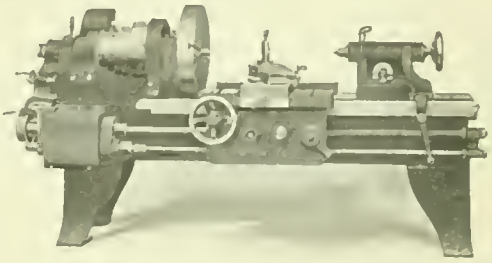
COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

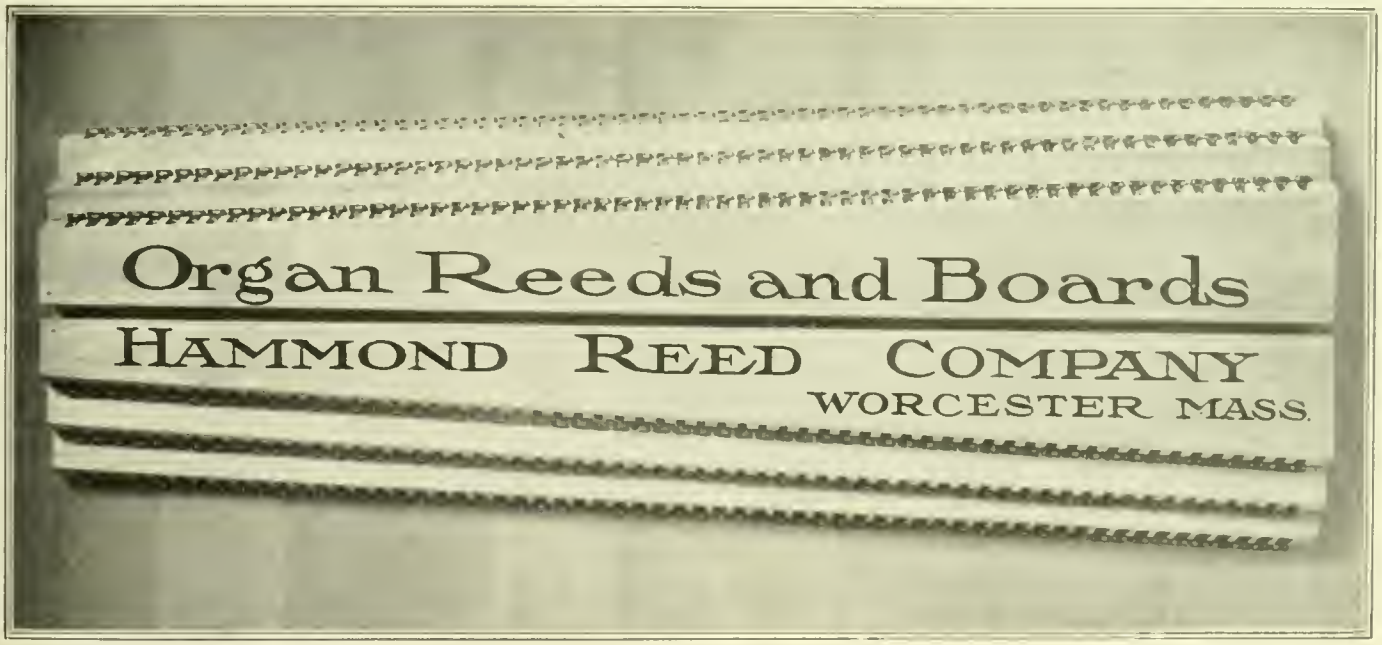


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all descriptions

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars
Ferrules and
Sheet Metal Specialties
Case Hardening
Nickel, Copper and
Brass Plating
also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

MANUFACTURERS, ATTENTION

All metal parts which have been broken, worn, or are otherwise defective can be made as good as new by our new Welding process. (Do not confuse this with brazing.)

We can save you the cost of a new part and its necessary fitting, as well as reduce loss of time. We weld cast iron, steel, brass, copper, cast steel, aluminum, and other metals.

We make a specialty of Automobile Cylinders and can weld cracked water jackets, broken flanges, cylinder walls, defective valve seats and any other parts made of cast iron. Metal can be added to any cast iron part to increase its strength.

We do not confine our work to automobile parts, however. Send all breakages from home or factory.

CENTRAL AUTOGENOUS WELDING COMPANY

73 UNION STREET, WORCESTER, MASS.

TELEPHONE 3412

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*
Iroquois Bohemian Lager, *Frank Jones' Golden Ale*

and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street
Worcester, Mass.

Telephone 2455

M. D. HOLMES & SONS COMPANY

PLUMBING INSTALLATION | PLUMBING OUTFITS HEATING SYSTEMS FINE SHEET METAL WORK | PIPING CONSTRUCTION

WORCESTER, MASSACHUSETTS
SALEM SQUARE

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

Opposite City Hall Park

New Park Hotel

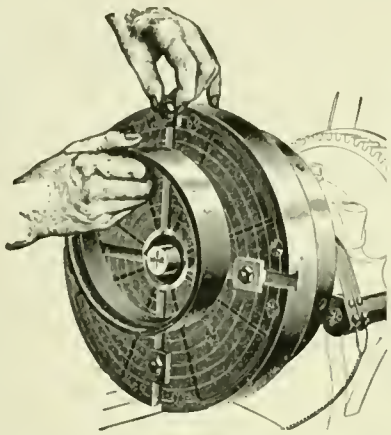
Home-like and Attractive

Excellent Cuisine

57 Park Street
Worcester, Mass.

JOHN F. KELLEHER, Manager

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made In Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 MASS.

Made In Worcester.

If you buy one barrel of this we know you will come again. It is of the same high quality that distinguishes all our oils and greases.

E. A. Buck & Company

East Worcester and Casco Streets
Worcester, Mass.

Palmer, Mass.

Buck's Best Auto Oil

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made In Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made In Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xxx
Alsten & Goulding, auto supplies, xx
American Car Sprinkler Co., car sprinklers, v
Anson Rix, Picture frames, vii
Blake, Jr., & Co., George F., iron and steel, and supplies, xxix
Blanchard & Co., F. S., printers, Inside back cover
Brosnihan Wrench Co., xxii
Brownell, George L., twisting and spinning machinery, xxxi
Buck & Co., E. A., oils and gasoline, xxx
Carlton Engraving Co., xviii
Carr Co., George W., granolithic and concrete work, xiv
Central Autogenous Welding Co., xxvii
Central Supply Co., Inside front Cover
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Motor Mart, xviii
Commonwealth Press, printers, iv
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, xxiv
DeLong, W. H., dental disks, xxx
Fenley, A. E., Hair dresser, xiv
Gambs Brothers, Merchant Tailors, xxii
Golbert Last Company, Back cover
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxiv
Hamill, L. C., xi
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxviii
Heywood Boot & Shoe Co., fine shoes, i
Higgins Co., R. H., Stearns Cars, xv
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery v
Holmes & Sons, M. D., Heating systems, xxviii
Howard Bros. Mfg. Co., vi
Howard-Wesson Co., Inc., x
Hudson Belting Co., leather belting, xxx
Hunt Metal Corner Co., xviii
Jones Supply Co., Writerpress, xxvi
Jackson St. Foundry, iron castings, xxvii
Kidder, R. E., drawing tables, v
Lee, Higginson & Co., securities, xxiii
Luce, E. B., commercial photographer, xxiv
Marsh, B. F., Lime and Cement, xiii
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxvii
Merchant's National Bank, xxiii
Morgan Construction Co., rolling mill equipment, iv
Mosher Real Estate Co., xxi
Multiple Woven Hose & Rubber Co., fire hose and belting, xxxi
New England Anchor Fence Co., iv
New England Audit Co., xi
New Park Hotel, xxix
Norcross Brothers Co., contractors and builders, ii
Norton Company, grinding wheels, xii
Norton Grinding Co., grinding machines, xix
People's Savings Bank, x
Pond Machine & Foundry Co., xxvii
Powers Company, F. E., coal, xxi
Pratt & Inman, iron and steel, xxv
Prentice Bros. Company, drilling machines, engine lathes xiv
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Royal Worcester Corset Co., xxvi
Spencer Wire Co., wire and wire articles, wire fences, vii
Springfield Street Railway Company, xvii
Standard Foundry Co., iron castings, xxvii
Standish Hotel, xxii
State Mutual Life Assurance Co., iii
Stockbridge Machine Co., shapers, viii
Stone & Foster Lumber Co., xxv
Tyler's Business College, xxiii
United States Envelope Co., vi
Walker & Co., O. S., chucks, xxx
Warren Hotel, The, xxix
Warren, J. F. & W. H., leather belting and mill supplies, xxiv
Wheelock Fence Company, viii
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxxi
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xvi
Wire Goods Co., wire hardware, x and Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xxix
Wood Lumber Co., P. W., xviii
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xxvi
Worcester Machine Screw Co., set, cap and machine screws, xvi
Worcester Mailing Company, ii
Worcester National Bank, iii
Wright Co., M. S., vacuum cleaners, xvi
Wright Wire Co., wire and wire cloth, wire rope, etc. i
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

G. L. Brownell,

Builder of

IMPROVED TWISTING AND SPINNING MACHINERY

For making Hard or Soft Twines, Lines, and Cordage. Wet or Dry Twist, from Cotton, Linen, Hemp, Manila, Sisal, Paper, Silk, Jute, Hair, Wool, etc.

Nos. 49 and 51 Union Street,
Worcester Massachusetts
Please address Station A.

Made in Worcester.

"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

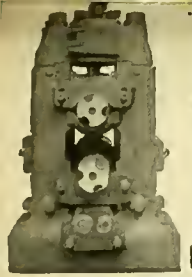
CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

IMPLICIT CONFIDENCE

CONFIDENCE is the corner-stone of business. The "confidence game" is eminently proper, provided the confidence is never betrayed. Some men have lost confidence in everybody; they are so suspicious that they cannot even trust themselves. Some of our best and oldest customers send us their printing jobs with no further stipulation than to "go ahead and get it out at the lowest price consistent with good work." It goes without saying that we have never betrayed such confidence by overcharges. Have you that much confidence in your printer? Can you trust everything to him? If not, you'd best make a change; for you are doing both yourself and the printer an injustice.

THE BLANCHARD PRESS WORCESTER, MASS.

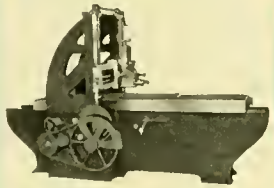


ROLLING MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN CONSTRUCTION COMPANY

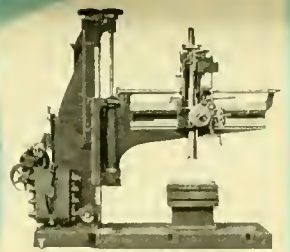
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES
PRENTICE BROS. CO.

SLATER BLDG.

WOODWARD & POWELL PLANER CO.

"WORCESTER-MADE" INVITES TRADE

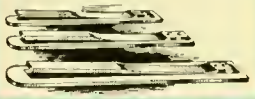
THE GRATON & KNIGHT MFG. CO.

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

ORGAN REEDS
HAMMOND REED COMPANY



FOR ALL MOTOR CARS

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.

BOX MACHINERY
HOBBS MANUFACTURING COMPANY

"MADE IN WORCESTER, U. S. A."

PROPOSED NEW UNION STATION

CITY HALL

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

GOVERNMENT BLDG.

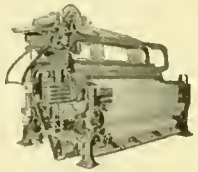
Golbert Last Co.

"BI-MOORE" BEST HOSE

MULTIPLE WOVEN HOSE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

HILL DRYER CO.

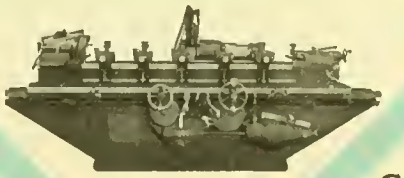
GOOD ENVELOPES

UNITED STATES ENVELOPE CO.

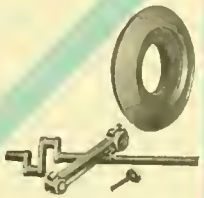
ART
NOVELTIES
VALENTINES

THE GEORGE C. WHITNEY COMPANY

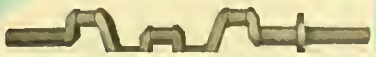
NORTON GRINDING MACHINES



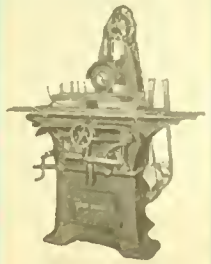
NORTON GRINDING CO.



The WYMAN & GORDON CO.
DROP FORGINGS



O. S. WALKER & CO.



SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.

Everything in Wire

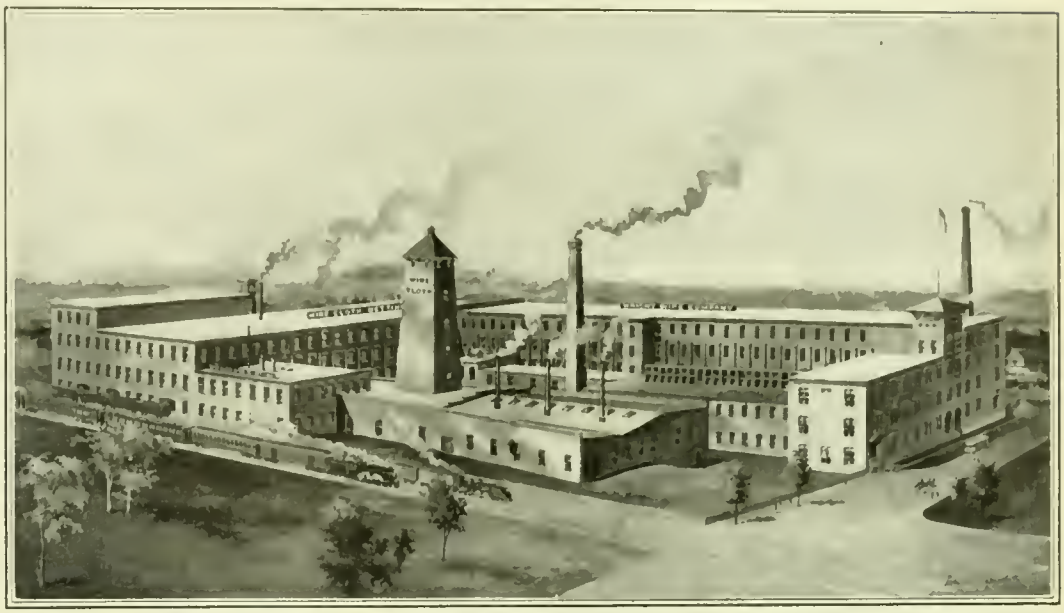
TRADE MARK

The Wire Goods Co.

WIRE

OF ALL KINDS

Wire Cloth
Poultry Netting
Wire Rope and Cable
Picture Cord
Coal and Sand Screens
Foundry Riddles
Elevator Cabs and Enclosures
Flower Bed Guard
Trellis and Ornamental Fencing

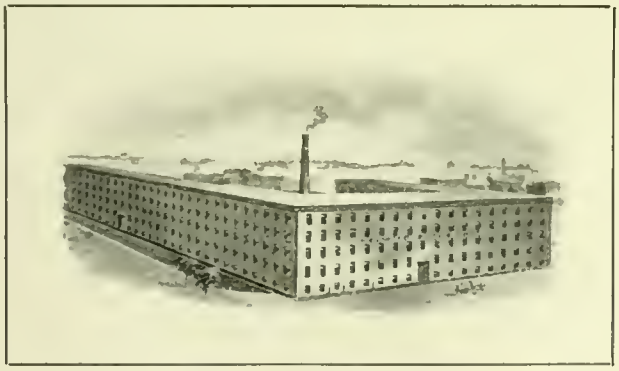


WORCESTER FACTORY

WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.



High Grade Shoes for Men

HEYWOOD TRADE MARK SHOE 1864

Factory and Main Office
70 Winter St., Worcester, Mass.

New York Office
127 Duane St., New York City

Retail Store
415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer
Buenes Aires, Argentine Republic

Patterson & Ruhfus
Melbourne and Sydney, Australia

HEYWOOD TRADE MARK SHOE 1864

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

BOSTON SAFE DEPOSIT & TRUST CO. BUILDING, Boston, Mass.
Shepley, Rutan & Coolidge — Architects
The Norcross Brothers Co. — Builders

THE NORCROSS BROTHERS COMPANY

General Contractors and Builders

WORCESTER, MASS.

NEW YORK — BOSTON
PROVIDENCE — WASHINGTON

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing, Hand Stripping Cards, German and Domestic Heddles

for Cotton, Woolen and Worsted Mills

Revolving Top Flats
remounted
Fillets redrawn

QUALITY is our
Inducement

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

1909

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester Massachusetts

Safe Deposit Department

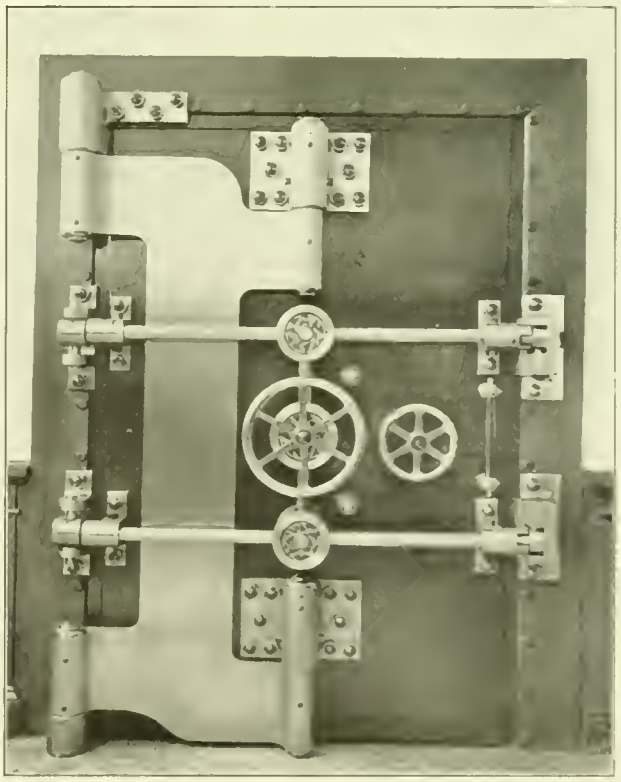
of the

Worcester National Bank

11 Foster Street

No one can afford to be without the protection of a Safe Deposit Box. Our SAFE DEPOSIT DEPARTMENT, *on the ground floor*, is light and accessible and our vaults are of the most modern construction.

Boxes $4 per annum and upwards



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

61 CONTINUOUS ROLLING MILLS

OF OUR DESIGN AND MANUFACTURE

WHERE THERE HAS BEEN CHANGE OF OWNERSHIP THE NAME OF ORIGINAL PURCHASER IS GIVEN IN PARENTHESES

UNITED STATES AND CANADA

American Steel & Wire Co. (American Wire Co.)	Cleveland, O.	Rod Mill	1888	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Billet Mill	1901	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Rod Mill	1901	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Rod Mill	1901	
Atlanta Steel Co.	Atlanta, Ga.	Bar, Hoop, Tie and Rod Mill	1904	
Cambria Steel Co.	Johnstown, Pa.	Billet and Sheet Bar Mill	1909	
Cambria Steel Co.	Johnstown, Pa.	Rod Mill	1909	2nd ORDER
Carnegie Steel Co. (American Steel Hoop Co.)	Youngstown, O.	Hoop and Tie Mill	1894	
Carnegie Steel Co. (Ætna Standard I. & S. Co.)	Mingo Jct., O.	Merchant Mill	1895	
Carnegie Steel Co.	Duquesne, Pa.	Billet Mill	1897	
Carnenie Steel Co.	Duquesne, Pa.	Merchant Mill	1900	2nd ORDER
Carnegie Steel Co.	Duquesne, Pa.	Merchant Mill	1900	2nd ORDER
Carnegie Steel Co.	Duquesne, Pa.	Billet Mill	1900	3rd ORDER
Carnegie Steel Co. (National Steel Co.)	Youngstown, O.	Billet Mill	1900	
Dominion Iron & Steel Co.	Sydney, N. S.	Rod Mill	1903	
Dominion Iron & Steel Co.	Sydney, N. S.	Billet Mill	1903	2nd ORDER
Dominion Iron & Steel Cu.	Sydney, N. S.	Merchant Mill	1910	3rd ORDER
Grand Crossing Tack Co.	Chicago, Ill.	Rod Mill	1899	
Grand Crossing Tack Co.	Chicago, Ill.	Steel Works and Billet Mill	1901	2nd ORDER
Illinois Steel Co.	Joliet, Ill.	Rod, Tie and Spike Rod Mill	1897	
Illinois Steel Co.	Milwaukee, Wis.	Roughing Mill	1901	2nd ORDER
Indiana Steel Co.	Gary, Ind.	24″ Billet Mill	1907	
Indiana Steel Co.	Gary, Ind.	18″ Billet Mill	1907	
Indiana Steel Co.	Gary, Ind.	18″ Sheet Bar Mill	1910	2nd ORDER
Inland Steel Co.	Indiana Harbor, Ind.	Merchant Mill	1906	
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Billet Mill	1892	
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1893	2nd ORDER
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1898	3rd ORDER
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1898	3rd ORDER
Jones & Laughlin Steel Co.	Aliquippa, Pa.	Rod Mill	1909	4th ORDER
Jones & Laughlin Steel Co.	Aliquippa, Pa.	Billet and Sheet Bar Mill	1909	5th ORDER
Lackawanna Steel Co.	Buffalo, N. Y.	Merchant Mill	1904	
Lackawanna Steel Co.	Buffalo, N. Y.	Billet and Sheet Bar Mill	1906	2nd ORDER
Lackawanna Steel Co.	Buffalo, N. Y.	Merchant Mill	1910	3rd ORDER
Oliver Iron & Steel Co.	Pittsburg, Pa.	Merchant Mill	1892	
Pittsburg Steel Co.	Monessen, Pa.	Billet Mill	1908	
Pittsburg Steel Co.	Monessen, Pa.	Rod Mill	1908	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	2nd ORDER
Republic Iron & Steel Co.	Moline, Ill.	Roughing Mill	1902	3rd ORDER
Republic Iron & Steel Co.	Youngstown, O.	Skelp Mill	1909	4th ORDER
Republic Iron & Steel Co.	Youngstown, O.	Billet and Sheet Bar Mill	1909	5th ORDER
Sharon Steel Hoop Co.	Sharon, Pa.	Roughing Mill	1904	
Upson Nut Co.	Cleveland, O.	Merchant Mill	1910	
Wickwire Brothers	Cortland, N. Y.	Rod Mill	1901	
Wisconsin Steel Co. (Deering Harvester Co.)	So. Chicago, Ill.	Merchant Mill	1902	
Wisconsin Steel Co. (International Harvester Co.)	So. Chicago, Ill.	Merchant Mill	1906	2nd ORDER
Youngstown Sheet & Tube Co.	Youngstown, O.	Billet Mill	1905	
Youngstown Sheet & Tube Co.	Youngstown, O.	Sheet Bar Mill	1905	
Youngstown Sheet & Tube Co. (Morgan Spring Co.)	Struthers, O.	Rod Mill	1905	
Youngstown Sheet & Tube Co.	Youngstown, O.	Skelp Mill	1906	2nd ORDER

EUROPE

Alpine Montan Gesellschaft	Donawitz, Austria	Rod Mill	1907
Georgs-Marien-Bergwerks & Huetten-Verein	Germany	Merchant Mill	1905
Gewerkschaft Deutscher Kaiser	Dinslaken, Germany	Hoop Mill	1903
Guest, Keen & Co.	England	Roughing Mill	1899
J. Mouton	Paris, France	Rod Mill	1903
Rheinische Stahlwerke	Meiderich, Germany	Merchant Mill	1903
Societe Anonyme d'Ougree-Marihaye	Ougree, Belgium	Rod Mill	1906
Vereinigte Koenigs-& Laurahuette, A. G.	Koenigshuette, Germany	Bar, Hoop, Tie and Rod Mill	1906
Whitehead Iron & Steel Co., Ltd. (L. D. Whitehead & Co.)	Tredegar, England	Bar, Hoop, Tie and Rod Mill	1906

MORGAN CONSTRUCTION CO.

WORCESTER, MASSACHUSETTS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

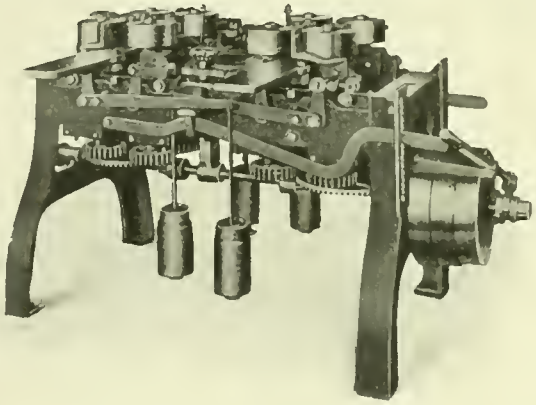
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

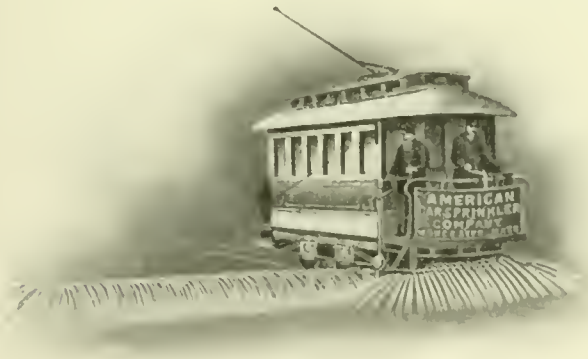
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST

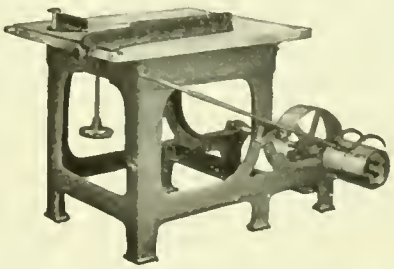


AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

L O O K !



Only $50.00 for an all Iron SAW BENCH with countershaft complete. It will pay you to investigate. Send for circular giving full particulars.

R. E. KIDDER

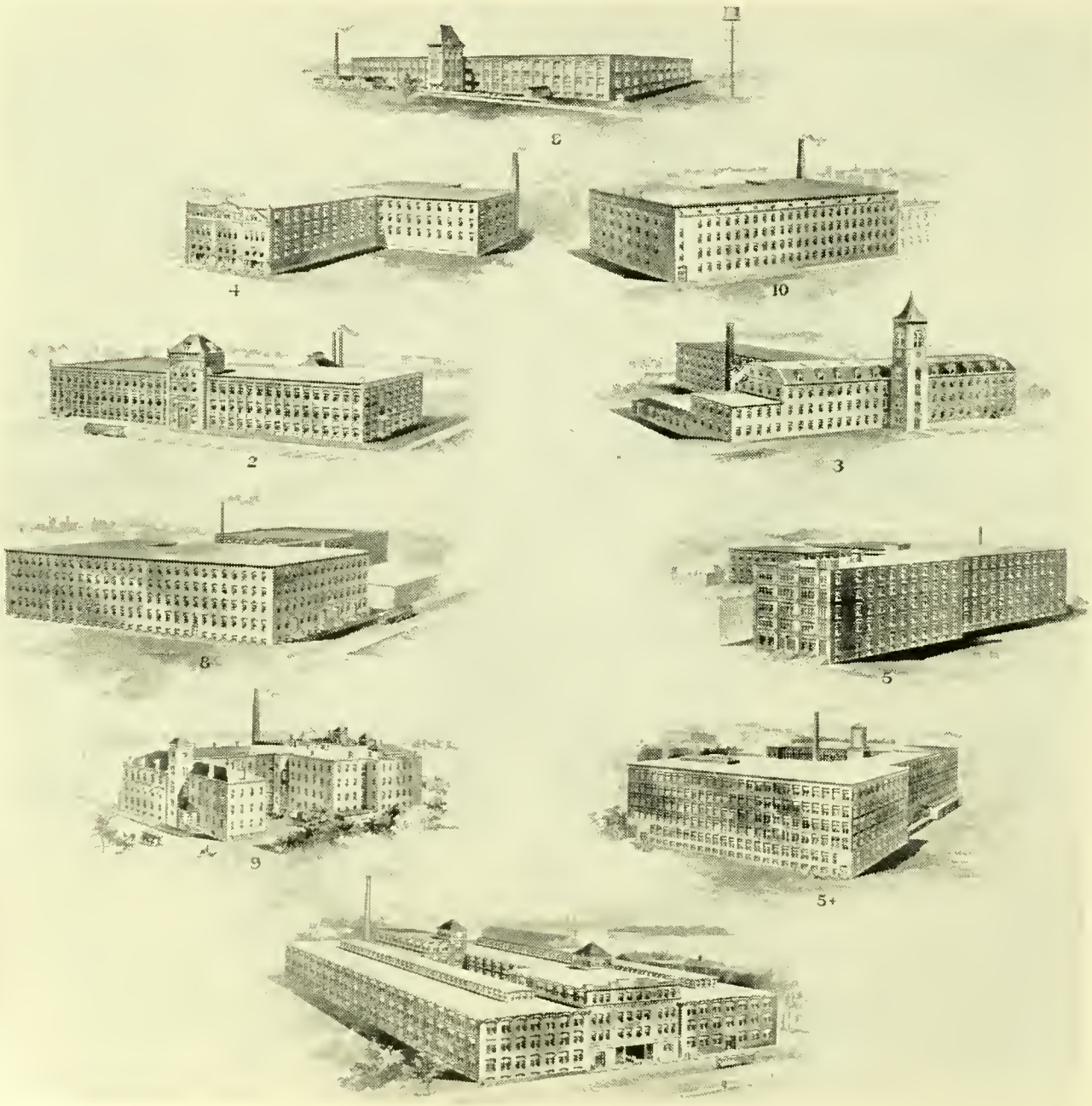
13 Hermon Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE — yourself, the advertiser and the publication.

The United States Envelope Company

Makers of

Good Envelopes



MANUFACTURING PLANTS
of the
UNITED STATES ENVELOPE COMPANY

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

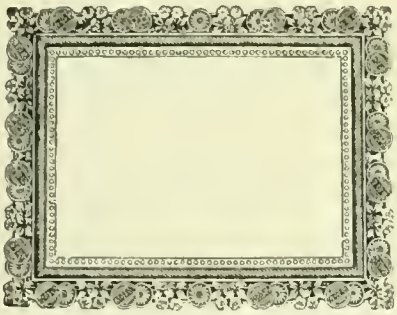
REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

ANSON F. RIX

PICTURE FRAMES

WHOLESALE AND RETAIL



I Green Lane WORCESTER, MASS.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

Write or 'Phone

for a copy of our

NEW CATALOG

Its eighty (80) pages, with seventy-three (73) halftone illustrations—some in two colors, are a veritable fund of information for every user of leather and leather belting

THE GRATON & KNIGHT MFG. CO.,

WORCESTER, MASS.

BRANCHES:

Atlanta, Ga., 93 95 Forsyth St.
Boston, Mass., 33 Lincoln St.
Chicago, Ill., 165 E. Lake St
Milwaukee, Wis. 103 W. Water St.
Minneapolis, Minn. 310 Third Ave., No.
New York, N. Y., 72 Warren St.
Philadelphia, Pa., 132 N. Third St.
Portland, Ore., 51 First St.
San Francisco, Cal. 30-32 Fremont St.
Seattle, Wash., 219 Occidental Ave.
St. Louis, Mo., 619 N. 8th St.

Selling Agents for Texas,
GRATON & KNIGHT MFG. CO. OF TEXAS
141 N. Austin St., Dallas, Texas.

THE NUMBER IS

WHOLESALE

RETAIL

NINE PLEASANT ST.

The Commonwealth Press
OLIVER B. WOOD
WORCESTER
MASS.

Printing craft can accomplish nothing finer than the catalogs and booklets which go forth bearing our stamp.

If you have done business with us you know this to be true. If you have not, why don't you give us an opportunity to "show you"?

New Englanders are the most fastidious business men in the world. We have been pleasing them for nearly 30 years.

This is a fair test.

Commonwealth Press

Oliver B. Wood

50 Foster Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building

Worcester — State Mutuel Building

Prospectus conteining one hundred references mailed upon request.

G. E. Stimpson & Co.

57-61-65 Pleasant Street

Worcester, Mass.

A large variety of up-to-date office furniture and appliances always in stock

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

TRADEMARK NORTON REGISTERED

Your Grinding Department

¶ Grinding Wheels that do not cut fast and cool handicap the grinding machines and the men running them, and such a handicap on the machine and operator holds down the production.

¶ You want a wheel that will increase the volume of your production—a wheel that will increase the efficiency of the grinding machine and operator—A Norton.

¶ If your grinding department is working under a handicap, we should like an opportunity to take up this matter of increasing the efficiency of man and machine with you.

New York: 50 Church St.
Chicago: 11 N. Jefferson St.
Niagara Falls: Alundum Plant.

NORTON COMPANY
WORCESTER, MASS.

127

IS YOUR ROOF ON TIGHT?

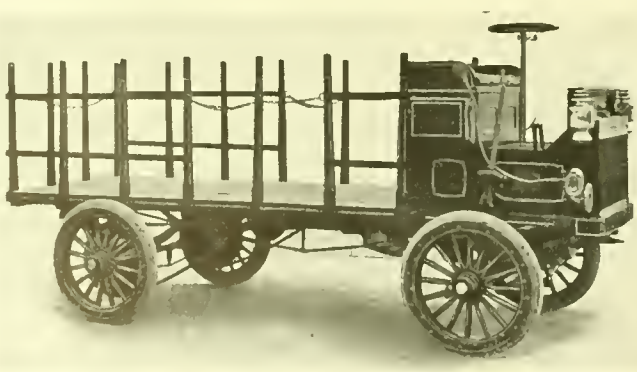
THE GEORGE W. CARR CO.
(H. C. WILSON)

ENGINEERS AND CONTRACTORS

"BARRETT SPECIFICATION"
(For Tar and Gravel Roofs)
Send for our Booklet on the subject.

WORCESTER

September and October are ideal months for making your roofs ready for Winter's storms.



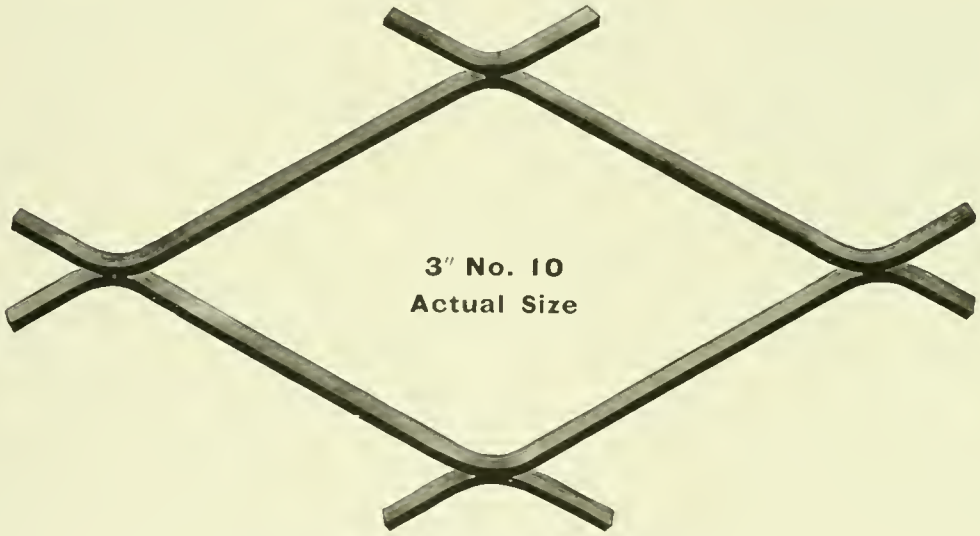
Johnson Service Company
Express Wagons and Motor Trucks
Warranted Perfect for
ONE FULL YEAR
1000 lbs. to 5 tons $1400 to $3250
All 4-Cylinder Power Plants and 3-Speed Transmissions
J. H. Watson, 54 Hermon Street
Sole Worcester County Agent

Automobile Repairing. Special Machinery
Machine Repairing Sprocket and Gear Cutting

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

AMERICAN STEEL & WIRE CO.'S
CONCRETE RE-INFORCING

CONCRETE RE-INFORCING



EXPANDED METAL
FOR
CONCRETE RE-INFORCING

B. F. MARSH

Cement, Lime, Hard Plasters,
Sewer Pipe

22 GARDEN STREET,
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street — Opposite City Hall

MORTGAGES

Mortgage investments made that will yield 7% on property of best character

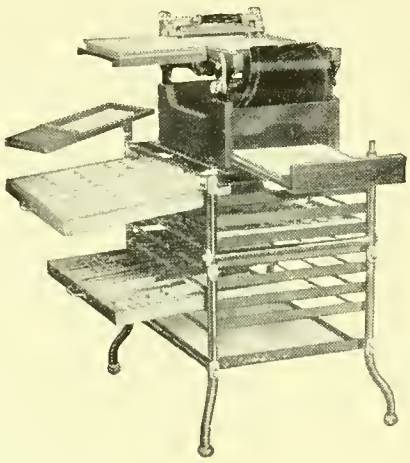
MAURICE F. REIDY

Real Estate and Fire Insurance

Rooms 829-830 State Mutual Building

WORCESTER, MASS.

Telephones 4669—5207



Few business men know what the Writerpress will do

¶ Most business men do know that properly executed facsimile letters constitute a tremendous business producing force.

¶ **WE** can make the Writerpress produce absolutely undetectable duplicates of a personally type-written letter or circular. We can handle your order in ANY quantity, the cost is small and we guarantee the work. We give your letters that **personal tone and appearance** which appeals instantly to the reader.

Special Trial Offer

¶ In order to get acquainted and show you the quality of our work, we will, on your first order, duplicate 1000 one-page letters of not more than 25 lines, on a good quality bond paper, letter head size, for only $3.50.

The Jones Supply Company

Telephone 6977 — Room 217

306 Main Street, Worcester, Massachusetts

In the center of the City

WE SUPPLY THE LARGEST MANUFACTURERS OF THE CITY AND COUNTY

FIRE BRICK — FIRE CLAY
LIME — CEMENT
Hot and Cold Iron Paint

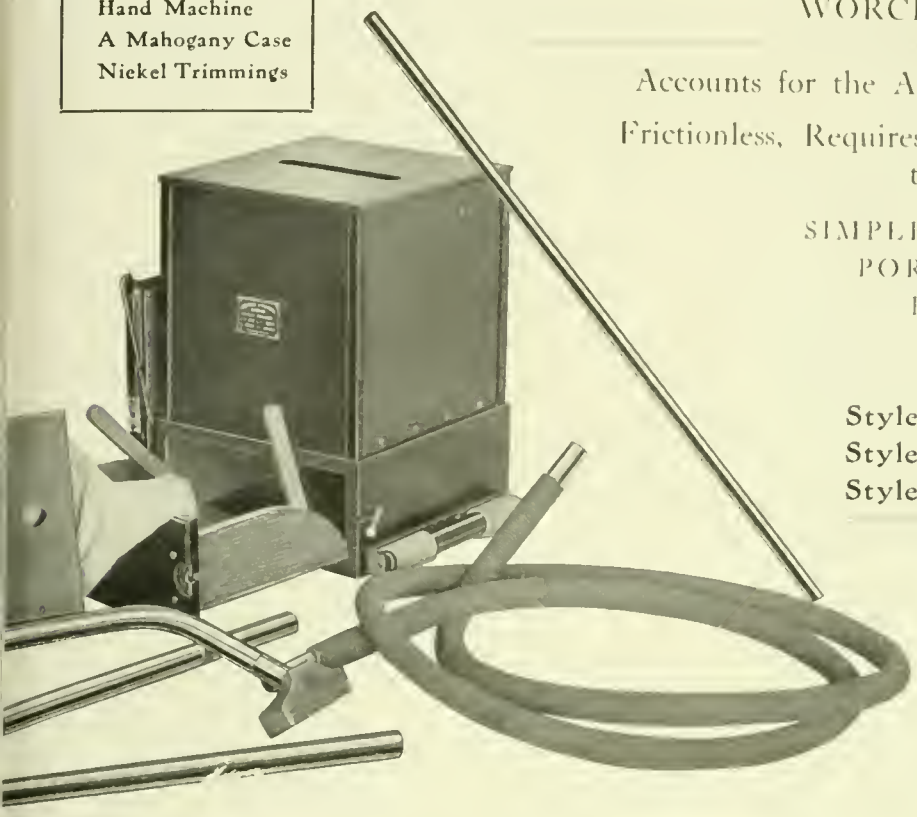
THE SMITH-GREEN CO.

WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

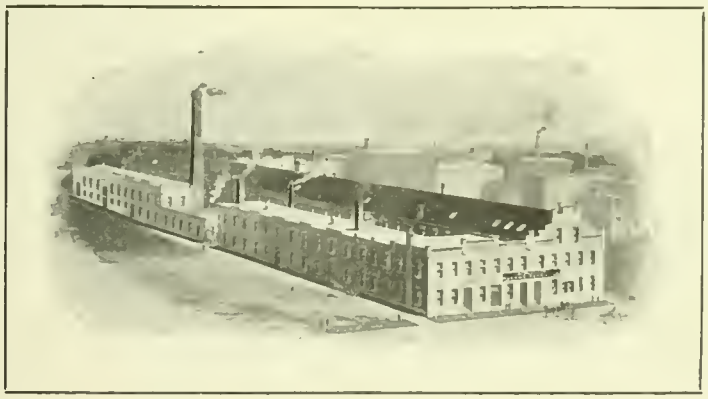
SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.
Manufacturers
Worcester

Pneuvac Company
Blake Building
Boston, Mass.



Worcester Machine Screw Co.

Branch of the

Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.

Millions Wear

WINSLOW'S Skates

Catalogues Free

THE BEST ICE AND ROLLER SKATES

THE SAMUEL WINSLOW SKATE MFG. CO., Worcester, Mass., U. S. A.

New York, 84 Chambers Street. London, 8 Long Lane, E. C. Paris, 61, Avenue de la Grande Armée.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MAURITZ JOHNSON

Upholstery
and
Drapery

Arcade, Slater Building
Rooms 200-201
Telephone 1085
Worcester, Mass.

Chrysanthemums

Walter E. Draper
FLORIST

752 Main Street Worcester, Mass.
Telephone 5464

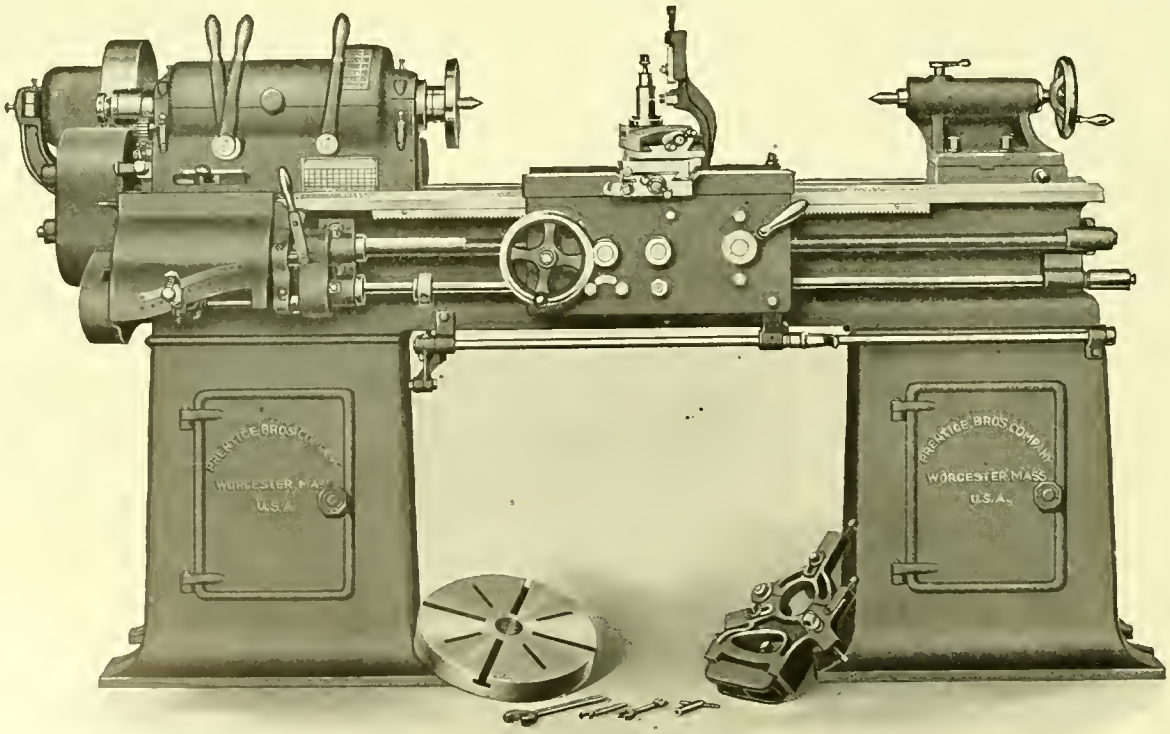
HARRY C. GRAY, Manager. Formerly head of Boston Store flower department.

Every man who takes pride in his personal appearance wants to keep his hair.

Now that you have tested tonics and washes won't you try a little applied intelligence, born of twenty years experience with hair troubles?

A. E. FENLEY

741 SLATER BUILDING WORCESTER, MASS.
MANICURING



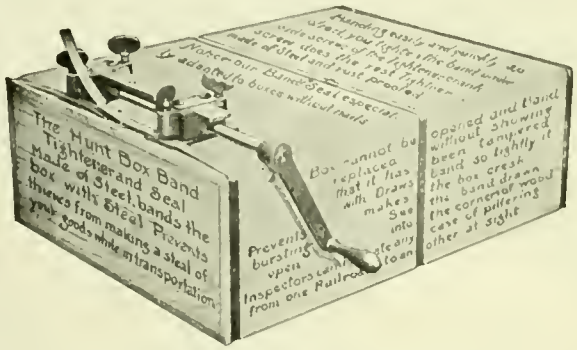
PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Put Your Bands on Tight

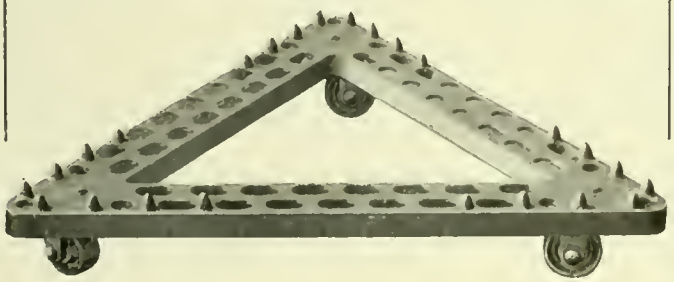


Patent Applied for.

THE HUNT BOX BAND TIGHTENER AND SEAL
Preserves Package and Prevents Thieving.
GET ONE

The Hunt Truck

STRONG DURABLE



All parts made of steel. All wheels and casters have roller bearings

CAPACITY, 1000 POUNDS

Galvanizing Department: Our alloy, zinc with steel, process has no superior

Hunt Metal Corner Co.

23 E. Main St., Westboro, Mass.

We don't have to prove that we make the Best quality Half-tones

WE ADMIT IT

Lets talk it over—you and Carlton Engraving Co. at 418 Main St., or by Phone 4550

A strong feature of our service is the preparation—suggestions, sketches, drawings, photographs, etc.

P. W. WOOD LUMBER CO.

WHOLESALE and RETAIL

GARDEN STREET

WORCESTER, - - MASS.

Telephone 4720-4721

We use Southard's Telegraph Code.

COMMONWEALTH MOTOR MART

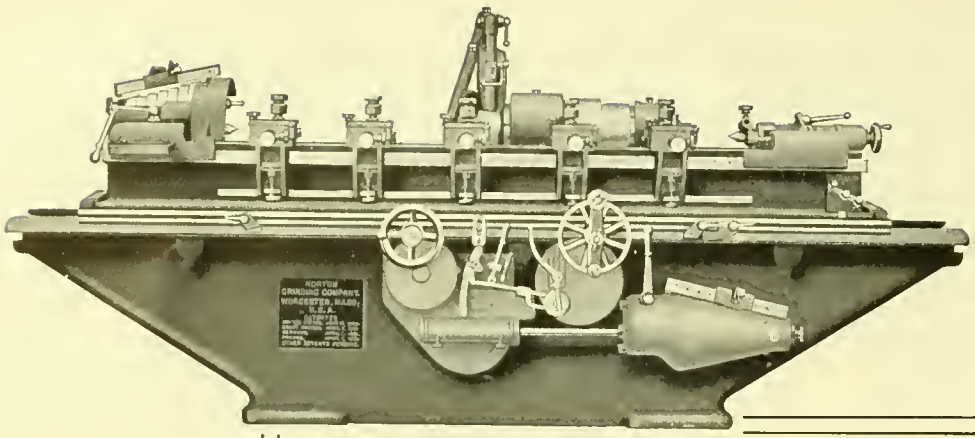
22 COMMERCIAL ST. E. O. WHEELER, Manager

Oxy-Acetylene Welding Department

EXPERT AUTO REPAIRING

Storage

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



The logic of modern grinding demands that your grinding machine be built with Steady Rests that are rigid and that have no springs. That's the way

"Norton" Grinders

are constructed. There's a machine for every requirement. The Catalog describes them all.

AGENTS

Vonnegut Hardware Co.
Indianapolis

Prentiss Tool & Supply Co.
New York, Boston, Buffalo, Syracuse

Henshaw Bulkley & Co.
San Francisco, Los Angeles

Robinson, Carey & Sands Co.
St. Paul and Duluth

Motch & Merryweather Mchy. Co.
Cleveland, Detroit and Cincinnati

Alfred Herbert, Ltd.
Coventry, Eng.

Manning, Maxwell & Moore
Pittsburg, St. Louis, Philadelphia, Atlanta

The Canadian Fairbanks Co.
Montreal, Toronto, Vancouver

F. W. Horne
Yokohama, Japan

Norton Grinding Company

Worcester, Massachusetts

Chicago Store: 11 North Jefferson Street

37 N

W. H. Sawyer Lumber Co.

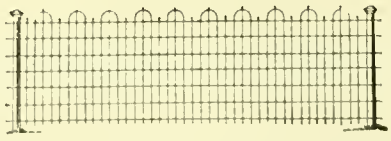
66 Lincoln St.
Worcester, Mass.

THE TIE THAT BINDS

NEW ENGLAND ANCHOR FENCE CO.

Main Office: Slater Bldg., Worcester, Mass.

Ornamental Fences and Gates of Wire or Wrought Iron



For Residences, Country Estates, Game Preserves, Public Grounds, Cemeteries and Factories.

Flower Bed Guards, Trellises, Arches, Tree Guards, Park Baskets

Why think of erecting a Wooden Fence when the Anchor will cost about the same and wear ten times as long?

Thoroughly Galvanized—an ornament wherever used

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Schultz & Guthrie

High Grade Ladies' and Misses' Dresses

WORCESTER, MASS.

Telephone 5542

MANUFACTURERS
OF
"GOOD SERVICE"
LADIES' AND MISSES'
DRESSES

OFFICES:

NEW YORK	18 West 27th Street
BOSTON	523 Washington Street
CHICAGO	225 Dearborn Street
DETROIT	30 Watson Street
DENVER	214 Colorado Building

WOOD CARVING MODELING

Everything from the idea to the finished product.

Models for Wood, Stone, Metal, Plaster, Cement.

L. C. HAMILL

94 Commercial Street

WORCESTER, - - MASS.

Made in Worcester.

We welcome

Rush Orders

for they give us an opportunity to show you what good

Multigraphing and Typewriting

we can do at short notice

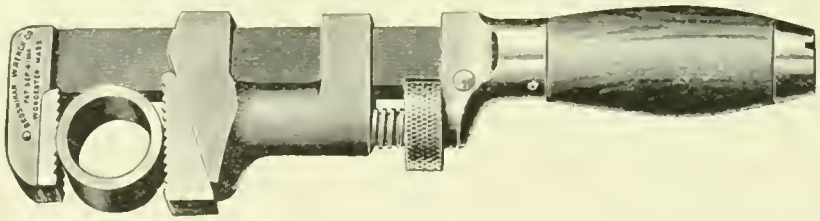
Worcester Mailing Company

GRACE L. BELKNAP, Proprietor

527 Slater Building

Agent for American Multigraph Sales Co.
Multigraph and Typewriter Ribbons and Supplies.

Look at the Wedge-Shaped Jaw



¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp.*

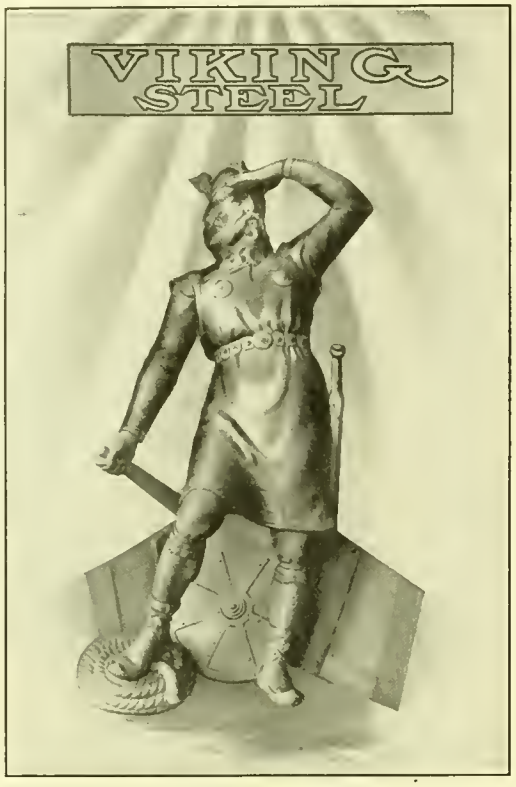
¶All wrenches 12" and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ROYAL WORCESTER *NON-RUSTABLE* CORSETS

For Fifty Years Universally Recognized as the World's Best *Medium Priced* Corsets

THE most valued charm of womanly beauty is a PERFECT FIGURE attained only through wearing a PERFECT CORSET correctly fitted.

ROYAL WORCESTER

corsets enhance and beautify every figure, moulding the form until it assumes the graceful and symmetrical lines of the ideal. All this and more is accomplished with ease and fully in accord with the laws of health and hygiene.

Ill-fitting, poorly-made corsets destroy the very charms which nature intended should be emphasized, and many a fine figure has been marred by lack of attention to that most important factor, the *correct corset* and how to wear it. Ask the corsetiere to assist you.

ROYAL WORCESTER CORSETS are the short cut to the fashionable figure of the moment. Try a pair and banish all your corset troubles.

BOSTON STORE
Denholm & McKay Co.

SOLE AGENTS ALSO FOR THE BON TON CORSETS $3 TO $15 AND ADJUSTO CORSETS $3 AND $5

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

EXCAVATING
OF ALL KINDS

CONCRETE AND
GRANOLITHIC WORK

FRANK P. MOSHER

GENERAL CONTRACTOR AND BUILDER

ROOM 737, SLATER BUILDING

WORCESTER, MASSACHUSETTS

THREE-DECKERS
A SPECIALTY

PERMANENT AND
CONSTRUCTION MORTGAGES

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.

Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A Striking Cut-out Effect

THE decorative possibilities of the 1910 line of **"VOGUE"** Wall Papers have never been excelled. These papers are beautiful artistically and are thoroughly practical. Many new and original features are presented this season. They are carried by all the leading decorators. Ask for them.

THEY ARE MADE IN WORCESTER BY ALLEN-HIGGINS WALL PAPER COMPANY

HOTEL STANDISH

WORCESTER, MASS.

NEW AND ATTRACTIVE

Permanent and transient guests accommodated
On direct route between Boston and New York. First-class garage nearby.
Rooms with or without baths.

Inquire for rates.

R. L. PRENTICE, *Proprietor* — J. McWALTER, *Manager*

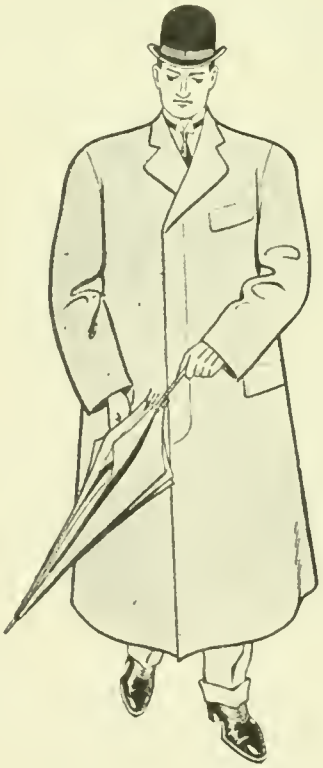
AUTO COATS
NORFOLK SUITS
FINE WOOLENS

GAMBS BROTHERS

MERCHANT TAILORS

12 PLEASANT STREET

WORCESTER, MASS.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

FOREIGN EXCHANGE

Safe Deposit Boxes

ACCOUNTS SOLICITED

MERCHANTS NATIONAL BANK

WORCESTER, MASS.

F. A. DRURY, President
C. A. EVANS, Vice-President

A. G. DAVIS, Cashier
C. S. PUTNAM, Assistant Cashier

LEE, HIGGINSON & CO.

INVESTMENT SECURITIES

338 MAIN ST., WORCESTER, MASS.

When you want an expert BOOKKEEPER or STENOGRAPHER—Call up

TYLER'S BUSINESS COLLEGE

which thoroughly trains young people to perform properly and successfully the work required in business life. Hundreds of our students are now in good positions in Worcester, and there is an increasing demand for others as competent. . . . . .

MULTIGRAPHING A SPECIALTY

EDNA I. TYLER, Principal.
Telephones 5012-6337.

SLATER BUILDING
Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

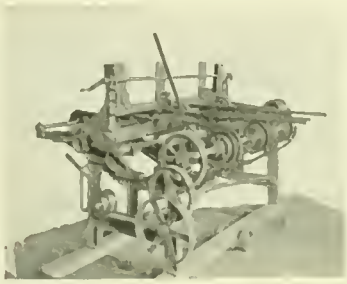
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



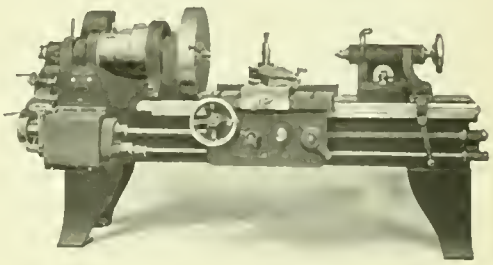
COMMERCIAL PHOTOGRAPHY.

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

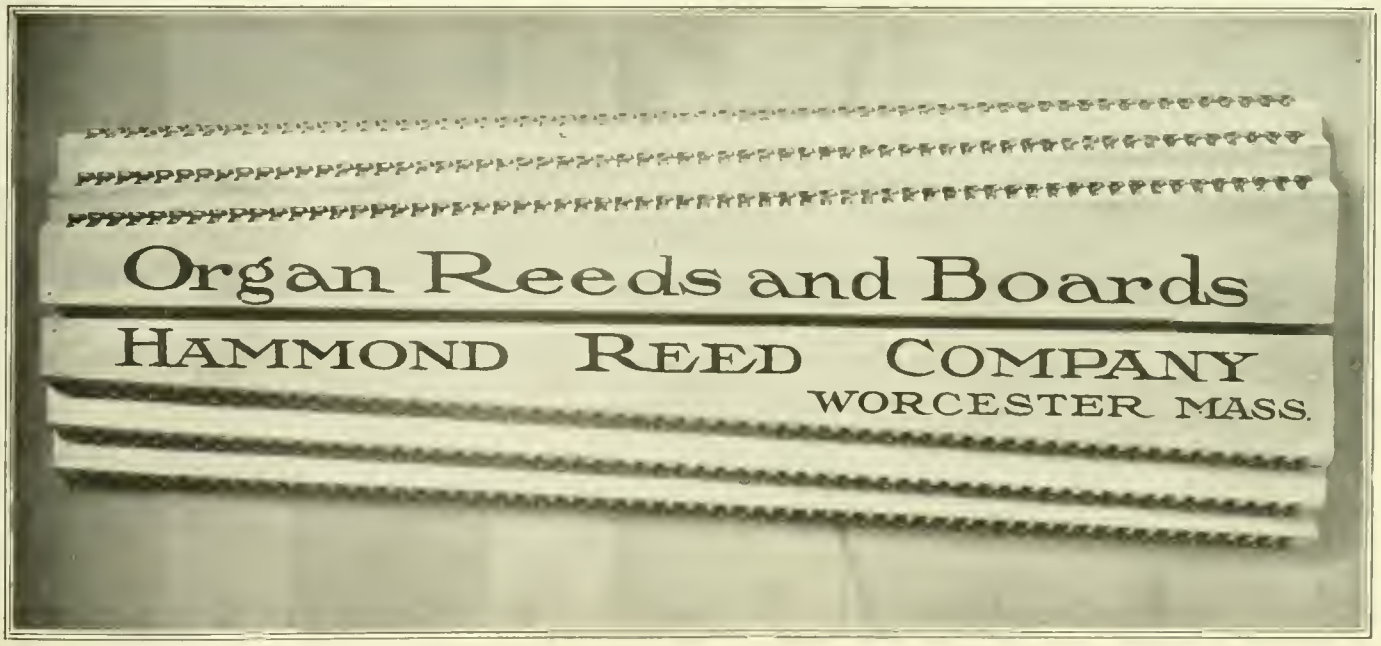


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all descriptions

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

Jackson Street Foundry

Light and Heavy

IRON CASTINGS

J. A. COLVIN, Proprietor

52 Jackson St., Worcester, Mass.

Made In Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made In Worcester.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars
Ferrules and
Sheet Metal Specialties
Case Hardening
Nickel, Copper and
Brass Plating
also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

MANUFACTURERS, ATTENTION

All metal parts which have been broken, worn, or are otherwise defective can be made as good as new by our new Welding process. (Do not confuse this with brazing.)

We can save you the cost of a new part and its necessary fitting, as well as reduce loss of time. We weld cast iron, steel, brass, copper, cast steel, aluminum, and other metals.

We make a specialty of Automobile Cylinders and can weld cracked water jackets, broken flanges, cylinder walls, defective valve seats and any other parts made of cast iron. Metal can be added to any cast iron part to increase its strength.

We do not confine our work to automobile parts, however. Send all breakages from home or factory.

CENTRAL AUTOGENOUS WELDING COMPANY

73 UNION STREET, WORCESTER, MASS.

TELEPHONE 3412

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*

Iroquois Bohemian Lager, *Frank Jones' Golden Ale*

and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street

Telephone 2455 *Worcester, Mass.*

M. D. HOLMES & SONS COMPANY

PLUMBING INSTALLATION

PLUMBING OUTFITS
HEATING SYSTEMS
FINE SHEET METAL WORK

PIPING CONSTRUCTION

WORCESTER, MASSACHUSETTS
SALEM SQUARE

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Woodbury and Company
Incorporated
Artists, Engravers
and Art Printers
Four Walnut Street
Worcester

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

EXPORT

FOREIGN TRADE

IMPORT

BALANCE OF TRADE AGAINST US. **"There's a reason"**

Do you interest yourself in getting the lowest rates?
Don't wait for your customer to kick.
He won't kick—too far away—**You simply lose him.**

NOW PAY ATTENTION and ship RIGHT.
Rate to on board ship Boston 8 cents, New York 30 cents.
Does this interest you? Regular sailings from Boston to—

London	China	Copenhagen	South America	Rotterdam
Christiania	Liverpool	Japan	Hamburg	Manilla

Low through rates quoted on **any commodity,** also through rates **to** Worcester from any part of Europe.
YOU must get in touch with US to know what YOU are losing.

DO IT NOW

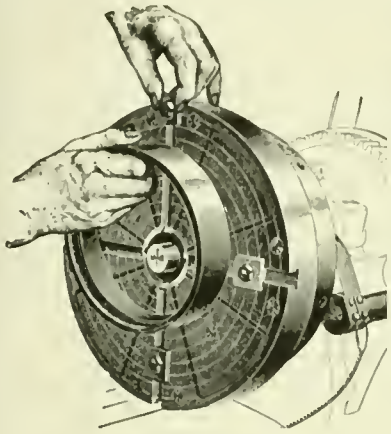
Marine Insurance at lowest rates. **Custom House Brokers** (United States Government License)
Goods entered and cleared at seaboard.

MACHINERY SHIPPERS ASSOCIATION

George F. Sweeney, Manager

11 Foster Street, Worcester, Mass. Telephone Connections **236 Old South Building, Boston, Mass.**

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 MASS.

Made in Worcester.

If you buy one barrel of this we know you will come again. It is of the same high quality that distinguishes all our oils and greases.

E. A. Buck & Company

East Worcester and Casco Streets
Worcester, Mass.

Palmer, Mass.

Buck's Best Auto Oil

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, 30
Allen-Higgins Wall Paper Company, 21
American Car Sprinkler Co., car sprinklers, 5
Blake, Jr., & Co., George F., iron and steel, and supplies, 21
Blanchard & Co., F. S., printers, Inside back cover
Brosnihan Wrench Co., 20
Buck & Co., E. A., oils and gasoline, 30
Carlton Engraving Co., 18
Carr Co., George W., granolithic and concrete work, 12
Central Autogenous Welding Co., 27
Central Supply Co., Inside front cover
Catlin Sumner Coal Co., 8
Coates Clipper Mfg. Co., flexible shafting, 10
Commonwealth Motor Mart, 18
Commonwealth Press, printers, 8
Crompton & Knowles Loom Works, looms, Inside back cover
Davis & Riggs, commercial photographers, 26
DeLong, W. H., dental disks, 30
Draper, Walter E., florist, 17
Fenley, A. E., hair dresser, 17
Gambs Brothers, merchant tailors, 21
Golbert Last Company, Back cover
Graton & Knight Mfg. Co., The, leather belting, 8
Hammond Reed Co., organ reeds, reed boards, organ supplies, 26
Hamill, L. C., 20
Harrington & Richardson Arms Co., firearms, Inside front cover
Heald Machine Co., The, machine tools, grinding machines, 9
Hewett Co., Geo. F., 28
Heywood Boot & Shoe Co., fine shoes, 1
Higgins Co., R. H., Stearns Cars, 15
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, 5
Hobbs Mfg. Co., wood-working and box-making machinery 5
Holmes & Sons, M. D., heating systems, 28
Howard-Wesson Co., Inc., 10
Hudson Belting Co., leather belting, 30
Hunt Metal Corner Co., 18
Jackson St. Foundry, iron castings, 27
Johnson, Mauritz, upholstery, 17
Jones Supply Co., Writerpress, 14
Kidder, R. E., drawing tables, 5
Lee, Higginson & Co., securities, 25
Lincoln Square Garage, Inside front cover
Luce, E. B., commercial photographer, 26
Marsh, B. F., lime and cement, 13
Matthews Mfg. Co., stove trimmings, ferrules, etc., 27
Merchants National Bank, 25
Morgan Construction Co., rolling mill equipment, 4
Morgan Spring Co., Back cover
Mosher Real Estate Co., 23
Multiple Woven Hose & Rubber Co., fire hose and belting, 31
National Telegraph Institute, 31
New England Anchor Fence Co., 19
New England Audit Co., 11
New Park Hotel, 29
Norcross Brothers Co., contractors and builders, 2
Norton Company, grinding wheels, 12
Norton Grinding Co., grinding machines, 19
People's Savings Bank, 10
Pond Machine & Foundry Co., 27
Powers Company, F. E., coal, 23
Pratt & Inman, iron and steel, 21
Prentice Bros. Company, drilling machines, engine lathes 17
Provident Life & Trust Co., 11
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., 7
Reidy, Maurice, real estate, 14
Rix, Anson, picture frames, 7
Royal Worcester Corset Co., 22
Sawyer Lumber Co., W. H., 19
Schultz & Guthrie, ladies' dresses, 20
Smith-Green Co., lime, fire brick, 14
Spencer Wire Co., wire and wire articles, wire fences, 7
Standard Foundry Co., iron castings, 27
Standish Hotel, 24
State Mutual Life Assurance Co., 3
Stimpson & Co., G. E., office furniture, 11
Stockbridge Machine Co., shapers, 10
Stone & Foster Lumber Co., 21
Tyler's Business College, 25
United States Envelope Co., 6
Walker & Co., O. S., chucks, 30
Warren Hotel, The, 29
Warren, J. F. & W. H., leather belting and mill supplies, 25
Watson, J. H., auto trucks, 12
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, 31
Williams & Bridges, wooden and paper boxes, 7
Winslow Skate Co., ice and roller skates, 16
Wire Goods Co., wire hardware, Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., 29
Wood Lumber Co., P. W., 18
Woodward & Powell Planer Co., light and heavy planers, 9
Worcester Business Institute, 14
Worcester Machine Screw Co., set, cap and machine screws, 16
Worcester Mailing Company, 20
Worcester National Bank, 3
Wright Co., M. S., vacuum cleaners, 16
Wright Wire Co., wire and wire cloth, wire rope, etc. 1
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

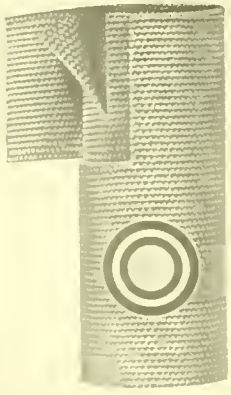
Learn Wireless and Railroad Telegraphy

Shortage of fully 10,000 operators on account of eight-hour law and extensive "wireless developments"

We operate under direct supervision of telegraph officials and positively place all students when qualified. Write for catalogue.

National Telegraph Institute

Cincinnati, Philadelphia, Memphis, Davenport, Ia.
Columbia, S.C., Portland, Oregon



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will be ONE THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

IMPLICIT CONFIDENCE

CONFIDENCE is the corner-stone of business. The "confidence game" is eminently proper, provided the confidence is never betrayed. Some men have lost confidence in everybody; they are so suspicious that they cannot even trust themselves. Some of our best and oldest customers send us their printing jobs with no further stipulation than to "go ahead and get it out at the lowest price consistent with good work." It goes without saying that we have never betrayed such confidence by overcharges. Have you that much confidence in your printer? Can you trust everything to him? If not, you'd best make a change; for you are doing both yourself and the printer an injustice.

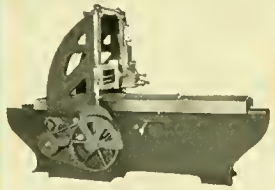
THE BLANCHARD PRESS WORCESTER, MASS.

MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN CONSTRUCTION COMPANY

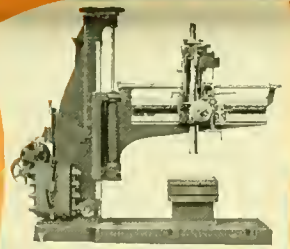
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES

PRENTICE BROS. CO.

SLATER BLDG.

& POWELL PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE GRATON & KNIGHT MFG. CO.

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

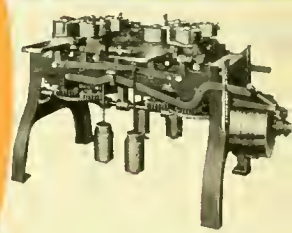
ORGAN REEDS
HAMMOND REED COMPANY

FOR ALL MOTOR CARS

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

"MADE IN WORCESTER, U. S. A."

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

MORGAN SPRING CO.

WIRE, SPRINGS AND WIRE SPECIALTIES

CITY HALL

GOVERNMENT BLDG.

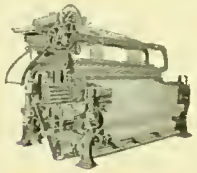
Golbert Last Co.

"BI-MOORE" BEST HOSE

MULTIPLE WOVEN HOSE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

ARMORY

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

HILL DRYER CO.

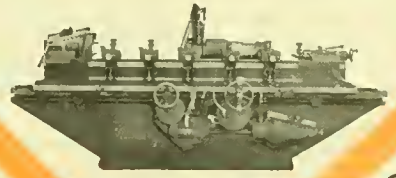
GOOD ENVELOPES

UNITED STATES ENVELOPE CO.

ART
NOVELTIES
VALENTINES

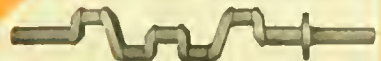
THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES

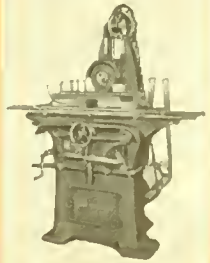


NORTON GRINDING CO.

The WYMAN & GORDON CO.
DROP FORGINGS



O. S. WALKER & CO.



SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.

Everything in Wire

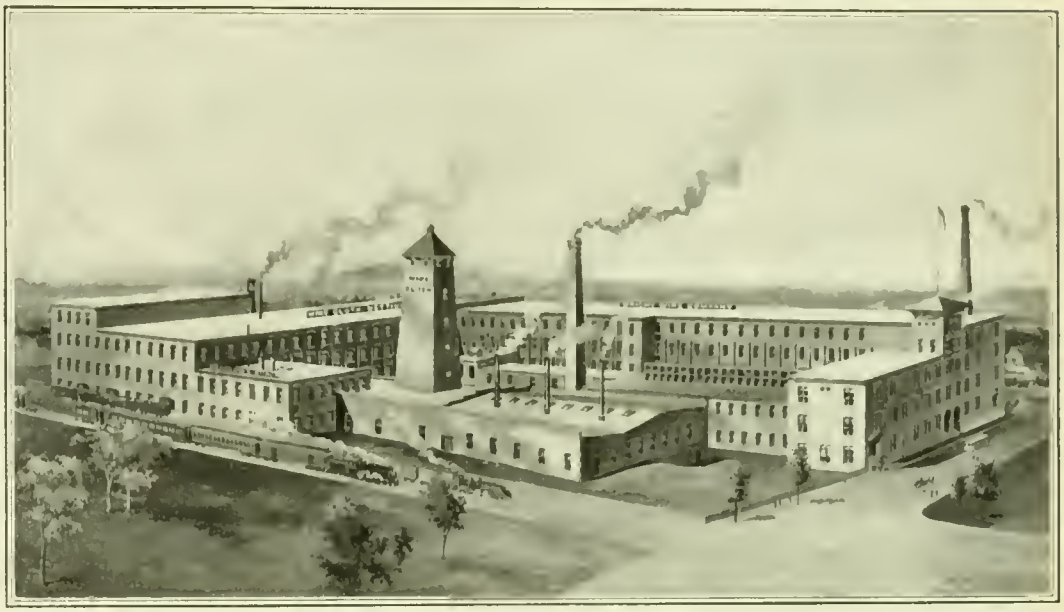
TRADE MARK

The Wire Goods Co.

WIRE

OF ALL KINDS

Wire Cloth
Poultry Netting
Wire Rope and Cable
Picture Cord
Coal and Sand Screens
Foundry Riddles
Elevator Cabs and Enclosures
Flower Bed Guard
Trellis and Ornamental Fencing

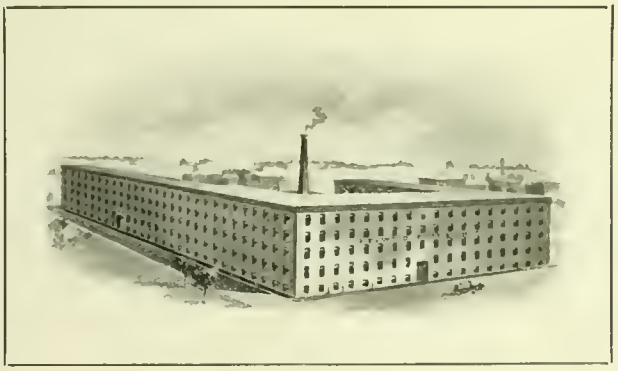


WORCESTER FACTORY

WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.



High Grade Shoes for Men

HEYWOOD TRADE MARK SHOE 1864

Factory and Main Office
70 Winter St., Worcester, Mass.

New York Office
127 Duane St., New York City

Retail Store
415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer
Buenes Aires, Argentine Republic

Patterson & Ruhfus
Melbourne and Sydney, Australia

HEYWOOD TRADE MARK SHOE 1864

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The Norcross Brothers Company

JOHN HAY MEMORIAL LIBRARY
Brown University, Providence, R.I.

Shepley, Rutan & Coolidge
Architects

The Norcross Brothers Co.
Builders

General Contractors and Builders

WORCESTER, MASS.

NEW YORK BOSTON
PROVIDENCE WASHINGTON

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing, Hand Stripping Cards, German and Domestic Heddles

for Cotton, Woolen and Worsted Mills

Revolving Top Flats
remounted
Fillets redrawn

QUALITY is our
Inducement

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

1909

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

State Mutual Life Assurance Company

(Incorporated 1844)

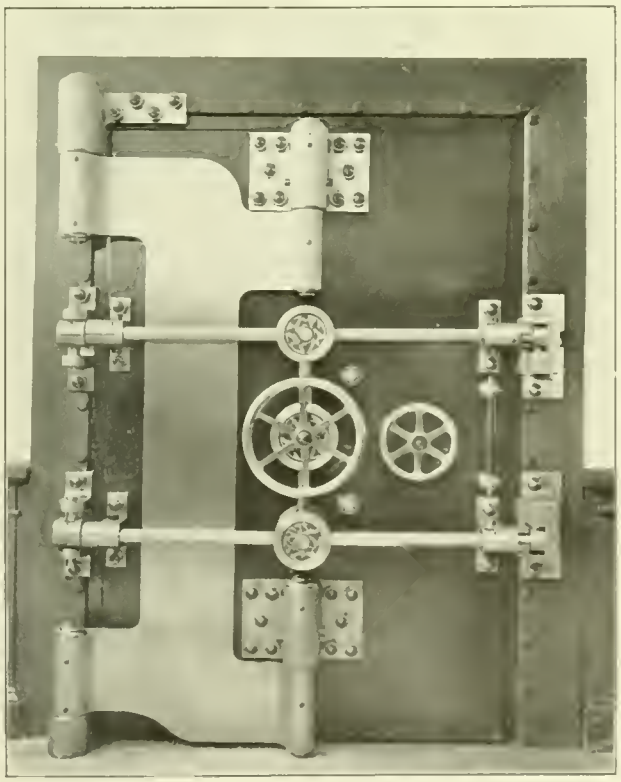
Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester Massachusetts



MANY persons who live in the agricultural districts surrounding Worcester find it convenient to deposit their money with this bank, paying their bills by check. This plan assures absolute safety for all money, protecting it against loss by fire, burglary or other mishap.

Deposits by mail are promptly acknowledged

Worcester National Bank

11 Foster Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Worcester Trust Company

Capital $500,000 Surplus $900,000

Total Resources $10,000,000

Suburban Accounts Invited

Deposits may be made by mail and will be promptly acknowledged and credited. Statements of accounts are mailed to out-of-town depositors at the close of each month.

Main Office, 342-344 Main Street

City Hall Branch
448 Main Street :: :: :: Lincoln Square Branch
11 Main Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

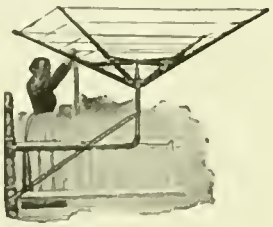
Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL'S CHAMPION LAWN CLOTHES DRYER



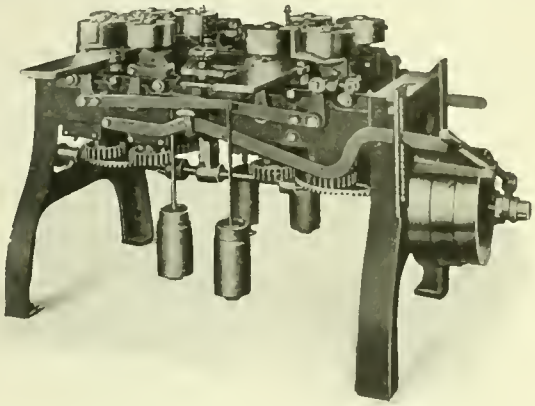
HILL'S BALCONY CLOTHES DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

Made in Worcester.

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

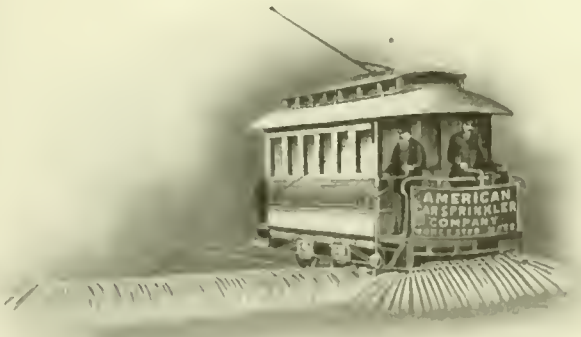
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST

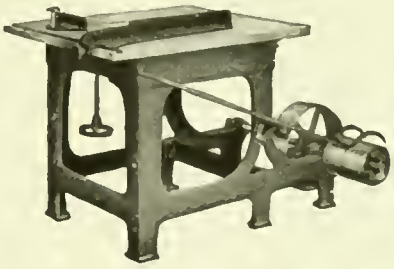


AMERICAN CAR SPRINKLER CO.

WORCESTER, MASS., U. S. A.

Made in Worcester.

L O O K !



Only $50.00 for an all Iron SAW BENCH with countershaft complete. It will pay you to investigate. Send for circular giving full particulars.

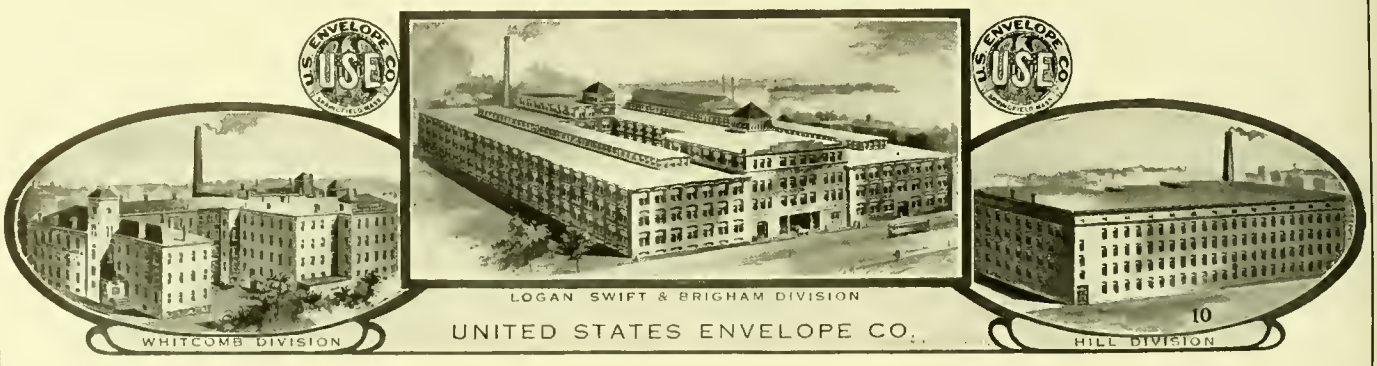
R. E. KIDDER

13 Hermon Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser and the publication.

United States Envelope Company

Manufacturers of Standard **Envelopes**



The Outlook Envelope

Insures economy and absolute accuracy in the addressing of all your mail matter.

The Improved

Columbian Clasp Envelope

The best and most satisfactory merchandise envelope made.

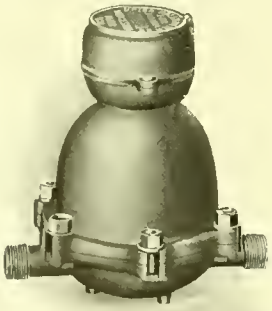
Specialists in STEEL DIE STAMPING

or Commercial Work. Samples and Prices of our Standard Goods furnished by your Stationer or Printer

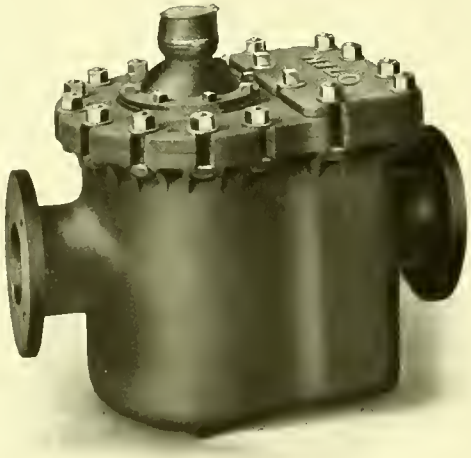
Made in Worcester.

The Leaders

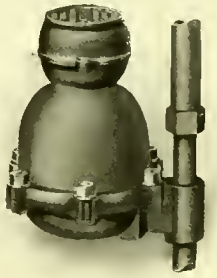
A Postal will bring Catalog W 46



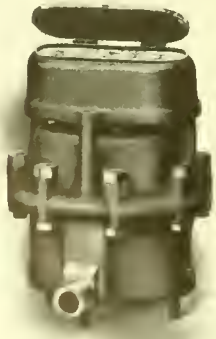
The King Disk Meter



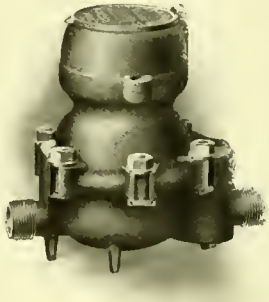
Nilo Meter



The King Disk Meter for Vertical Setting



Union Rotary Meter
Made in Worcester.



Columbia Meter

Union Water Meter Co.

Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of

Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

Made in Worcester.

REED & PRINCE MFG. CO.

Worcester, Mass., U. S. A.

ANSON F. RIX

PICTURE FRAMES

WHOLESALE AND RETAIL

1 Green Lane WORCESTER, MASS.

EVERY VARIETY

of WOODEN *and* PAPER

ALSO CLOTH COVERED BOXES

BOXES

One of the Most Complete Plants in Massachusetts

WILLIAMS & BRIDGES CO.

Manufacturers

72-86 Central St., Worcester, Mass.

Made in Worcester.

ESTABLISHED 1820

WIRE

OF ALL KINDS

SPENCER WIRE CO.

WORCESTER
MASS.

NEW YORK
BOSTON
ST. LOUIS
CHICAGO
PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

May We Present You with this Book?

This Eighty-Page Book

overflows with just the kind of information that is constantly needed by every one who uses or sells belting and its associated products.

It tells you how to obtain the greatest efficiency from Leather Belting.
It illustrates and describes the various cuts of market leather.
It pictures a variety of leather strappings, halters and automobile leathers.

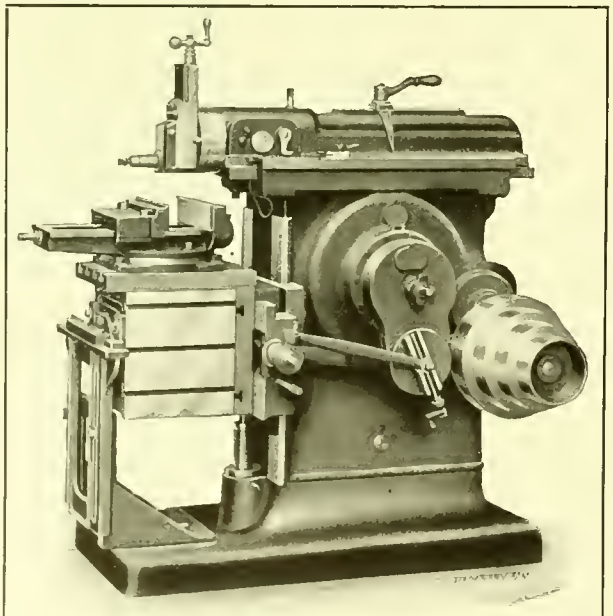
Do you want a copy? Write or 'phone us.

THE GRATON & KNIGHT MFG. CO.,
WORCESTER, MASS.

BRANCHES:

Atlanta, Ga., 93-95 Forsyth St.
Boston, Mass., 33 Lincoln St.
Chicago, Ill., 165 E. Lake St.
Milwaukee, Wis., 103 W. Water St.
Minneapolis, Minn., 310 Third Ave., No.
New York, N. Y., 72 Warren St.
Philadelphia, Pa., 132 N. Third St.
Portland, Ore., 51 First St.
San Francisco, Cal., 30-32 Fremont St.
Seattle, Wash., 219 Occidental Ave.
St. Louis, Mo., 619 N. 8th St.

Selling Agents for Texas,
GRATON & KNIGHT MFG. CO. OF TEXAS
141 N. Austin St., Dallas, Texas.



16″ B. G. STOCKBRIDGE HIGH SPEED SHAPER

For full description see this issue of the Worcester Magazine

STOCKBRIDGE MACHINE COMPANY
WORCESTER, MASS., U. S. A.

The Commonwealth Press
OLIVER B. WOOD
WORCESTER
MASS.

Printing craft can accomplish nothing finer than the catalogs and booklets which go forth bearing our stamp.

If you have done business with us you know this to be true. If you have not, why don't you give us an opportunity to "show you"?

New Englanders are the most fastidious business men in the world. We have been pleasing them for nearly 30 years.

This is a fair test.

Commonwealth Press
Oliver B. Wood
50 Foster Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building
Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

School of the Worcester Art Museum

SALISBURY HOUSE, 24 HIGHLAND STREET

Day and Evening Classes

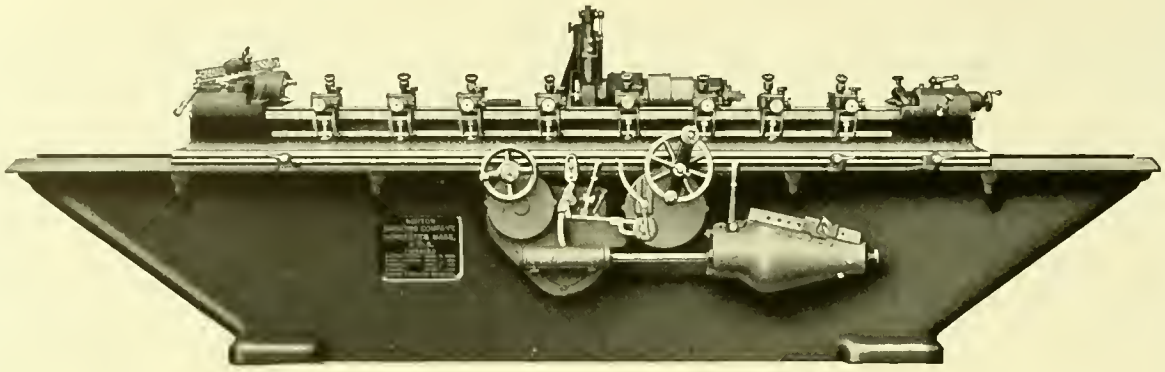
CLASSES	INSTRUCTORS
DESIGN	H. STUART MICHIE
DRAWING AND PAINTING	O. VICTOR HUMANN
METAL ENAMELING AND MODELING	EDMUND B. ROLFE
BOOKBINDING	ELIZABETH G. MAROT

Saturday Morning Class in Painting

Free scholarships in evening classes.
For information concerning hours and tuition, apply at the school.

H. STUART MICHIE,
Principal

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser and the publication.



"The world does not need to be informed so much as to be reminded."

We are reminding you to try **Norton Grinders** for all cylindrical work that revolves on two dead centers.

Many have done so, and the saving in time and labor has justified their continued use of **Norton Grinders.**

When you consider that every **Norton Grinder** is guaranteed to grind work accurate to one-quarter thousandth of an inch, and is sold with the distinct understanding that it must do this or you are not asked to keep it, it ought to interest you enough to seek further details.

Here is a Definite Proposition

Send us a sketch of the work you want to grind and we will furnish an estimate, showing the exact time required to grind it on a **Norton Grinder.**

AGENTS

Vonnegut Hardware Co.
Indianapolis

Robinson, Carey & Sands Co.
St. Paul and Duluth

Manning, Maxwell & Moore
Pittsburg, St. Louis, Philadelphia, Atlanta

Prentiss Tool & Supply Co.
New York, Boston, Buffalo, Syracuse

Motch & Merryweather Mchy. Co
Cleveland, Detroit and Cincinnati

The Canadian Fairbanks Co.
Montreal, Toronto, Vancouver

Henshaw Bulkley & Co.
San Francisco, Los Angeles

Alfred Herbert, Ltd.
Coventry, Eng

F. W. Horne
Yokohama, Japan

Norton Grinding Company

Worcester, Massachusetts

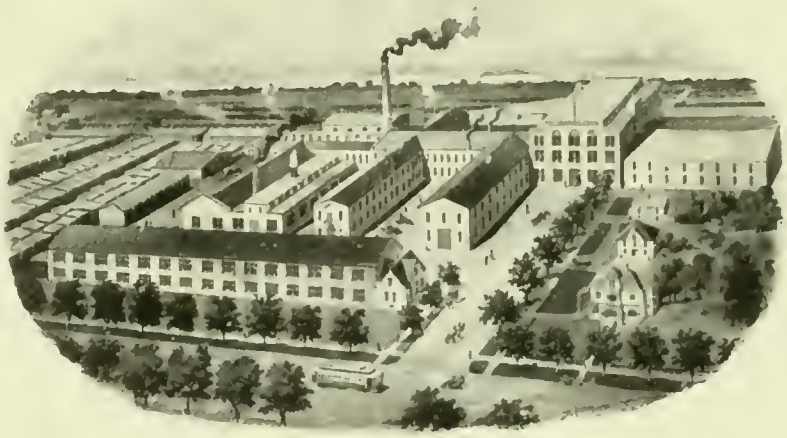
Chicago Store: 11 North Jefferson Street

H N

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Established 1851

Incorporated 1867



The home of the family of celebrated

Joliet Power Corn Shellers

The Oldest and Best Known Sheller
Line in the World

Joliet Manufacturing Company :: Joliet, Illinois

J. E. STONE

Dealer in

Coal Tar Products

Prepared Roofing, Building Papers

Creosote
Shingle Stains

Distributor for Barrett's Crow Tar

Makes seed-corn proof against crows
Nothing else so sure.

26 Southbridge Street
Worcester - - Mass.

Commercial Photography

The demand for master workmen and modern apparatus is nowhere more exacting than in the field of Commercial Photography.

We can place at your service the most expert operators and the best and most complete photographic equipment to be obtained.

These facts are of vital importance in considering where to place your photographic work.

Woodbury & Company
Incorporated
Artists, Engravers, Art Printers
Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Post Card.

PLACE STAMP HERE.
DOMESTIC: ONE CENT.
FOREIGN: TWO CENTS.

This space may be used for correspondence

If you send out form letters or post card notices - - Phone 6977 and we will call on you with samples of paper, cards and workmanship.
We can fill any order, from a dozen, for 15¢, up to thousands.
We promise good work done quickly. Try us.

Address only to be written here

THE JONES SUPPLY CO.,
#306 Main Street,
Worcester, Mass.
U. S. A.

MORTGAGES

Mortgage investments made that will yield
7% on property of best character

MAURICE F. REIDY

Real Estate and Fire Insurance

Rooms 829-830 State Mutual Building
WORCESTER, MASS.

Telephones 4669—5207

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems
Go Ahead Methods

Everything the best that money and brains can produce
The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street **Opposite City Hall**

WE SUPPLY THE LARGEST MANUFACTURERS OF THE CITY AND COUNTY

FIRE BRICK FIRE CLAY
LIME CEMENT
Hot and Cold Iron Paint

THE SMITH-GREEN CO.

WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

LOOK!

No Laths No Plaster

Just **BEAVER BOARD**

"The Modern Wall Construction"

B. F. MARSH

Wholesaler and Retailer

of

Lime, Cement, Hard Mortar, Face Brick

22 GARDEN STREET, WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

STABILITY Characterizes

Our Name Development

CLAFLIN-SUMNER
COAL COMPANY
1910

CLAFLIN COAL COMPANY 1908

SUMNER COAL COMPANY 1907

C. W. CLAFLIN & CO. 1875

H. E. SUMNER 1903

E. A. SUMNER 1875

A "Worcester-Made-Invites-Trade" Company

The Claflin-Sumner Coal Co.

Wholesale Retail

9 Pleasant Street 9
The Number Is

W. H. Sawyer Lumber Co.

66 Lincoln St.
Worcester, Mass.

Thanksgiving Greetings

After you have seen the Corn Show, come in and look over my new quarters. They aren't as large as the Exposition Buildings, but they are a lot more comfortable than my old office. In the same building, but on a different floor.

Frank P. Mosher

General Contractor and Builder

Rooms 541-543 Slater Building
Worcester, Mass.

Real Estate and Mortgages

Farm Properties of every description

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Standard Foundry Company

IRON FOUNDERS

Special attention given to the
Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.

JACKSON STREET FOUNDRY

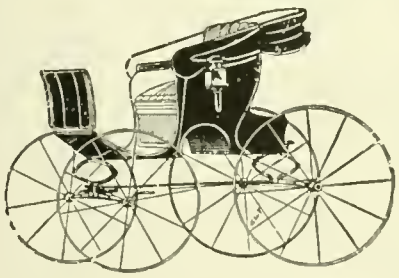
LIGHT AND HEAVY

IRON CASTINGS

J. A. COLVIN, Proprietor

52 JACKSON STREET, WORCESTER, MASS.

Made in Worcester.



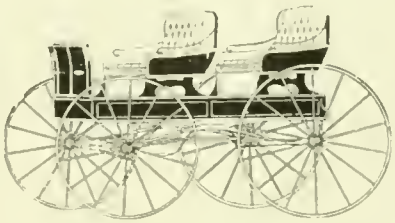
Business Established in 1814 Incorporated 1897

J. W. Sargent & Son Co.

Fine Carriages

SLEIGHS, ROBES AND HARNESS

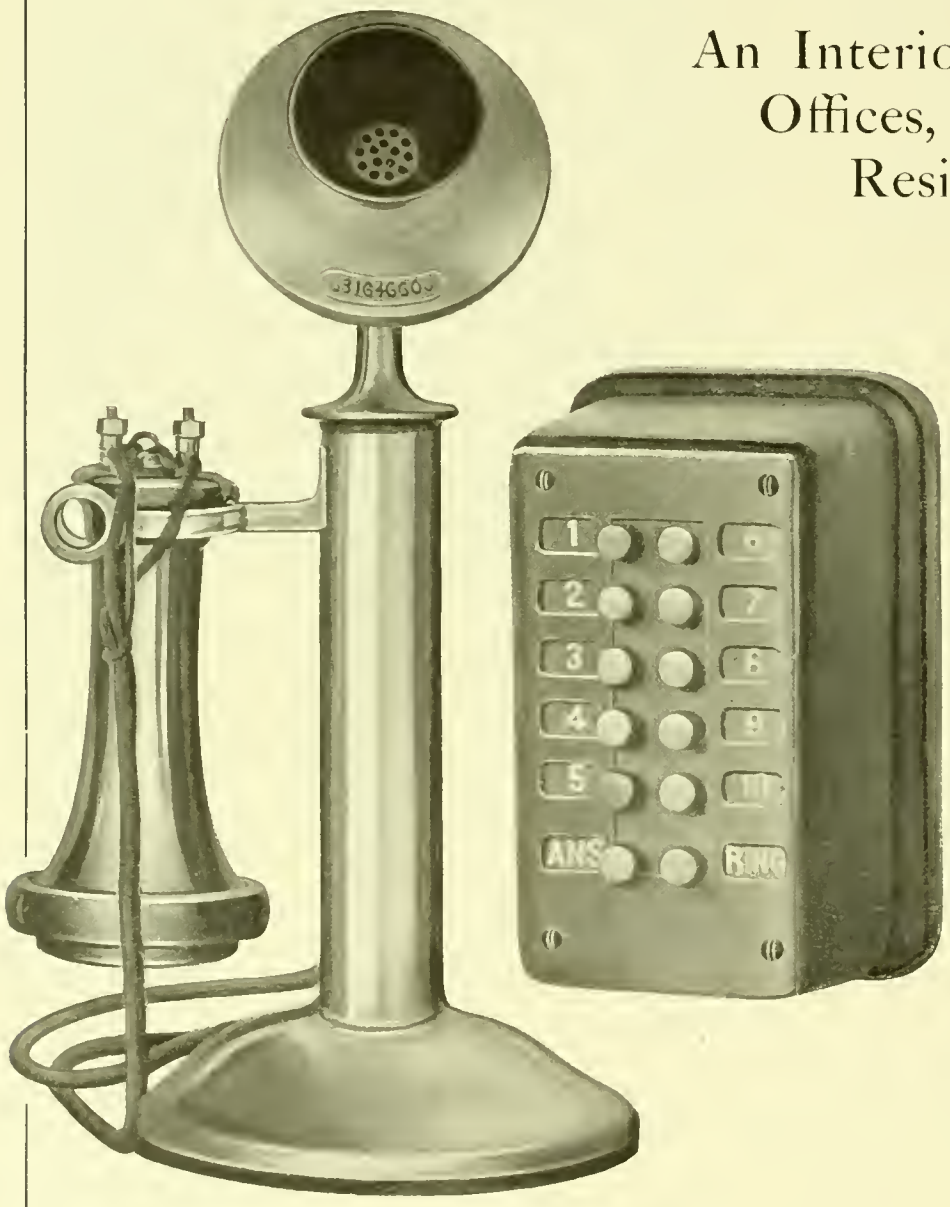
34, 36 & 38 Waldo St., Worcester, Mass.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Private Line Telephones

Not Connected with "Central"



An Interior System for Offices, Factories, Residences

By "pressing a button" you automatically connect with the room or department to which you wish to talk. No operator required.

Keeps a business man in touch with every branch of his business every minute of the day.

No need of running up and down stairs or from one shop to another.

Invaluable to the mistress of a large household.

Either Wall or Desk Telephones furnished.

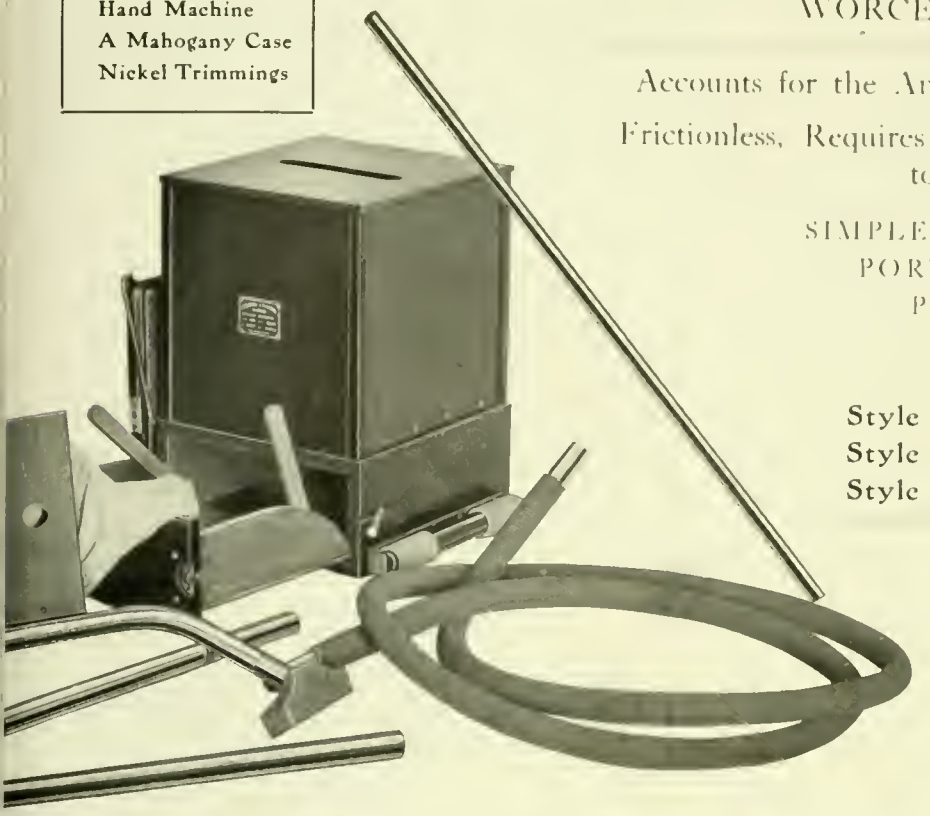
For estimates of cost, call our Local Manager, or write the Branch Exchange Department, 101 Milk Street, Boston.

New England Telephone and Telegraph Company

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown	-	$30
Style C, Electric, Household,	-	125
Style B, Electric, for Hotels, etc.		150

M. S. Wright Co.
Manufacturers
Worcester

Pneuvac Company
Blake Building
Boston, Mass.

Worcester Machine Screw Co.

Branch of the

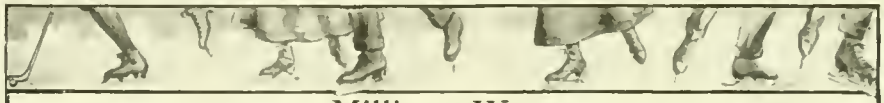
Standard Screw Company

Makers of

Set Screws, Cap Screws, Machine Screws, Taper Pins, Milled Studs, Special Parts

Beacon and Jackson Streets
Worcester, Massachusetts

Made in Worcester.



Millions Wear

WINSLOW'S Skates

Catalogues Free

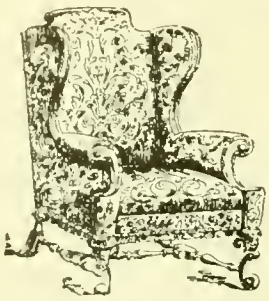
THE BEST ICE AND ROLLER SKATES

THE SAMUEL WINSLOW SKATE MFG. CO., Worcester, Mass., U. S. A.

New York, 84 Chambers Street. London, 8 Long Lane, E. C. Paris, 64, Avenue de la Grande Armée.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MAURITZ JOHNSON



Upholstery
and
Drapery

Arcade, Slater Building
Rooms 200-201
Telephone 1085
Worcester, Mass.

Chrysanthemums

Walter E. Draper
FLORIST

752 Main Street Worcester, Mass.

Telephone 5464

HARRY C. GRAY, Manager. Formerly head of Boston Store flower department.

THE DAVIS PRESS

38 AND 44 FRONT ST., WORCESTER MASSACHUSETTS

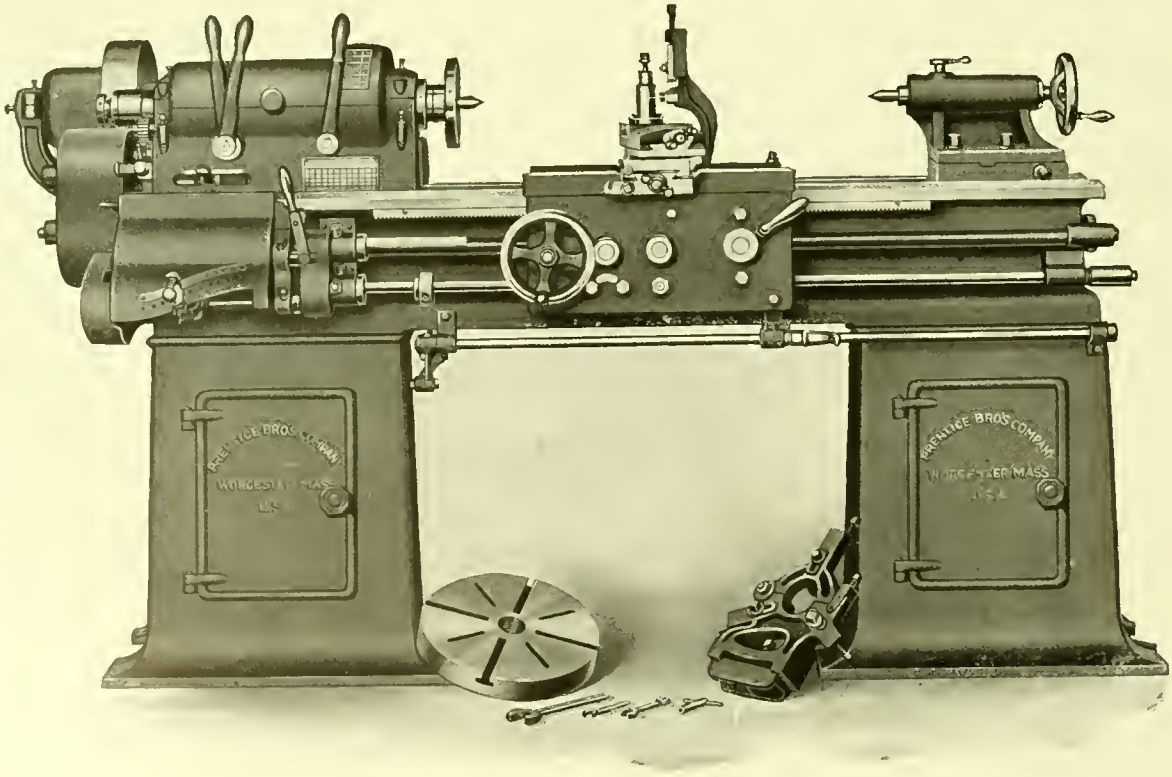
SOME SPECIALTIES

Printing and Mailing
We carry stencil lists. "Let George" mail notices and printed matter to your customers and club members. Saves you time and trouble, at small expense.

Advertising Literature
The kind that catches the eye and "gives the sense."

Loose-Leaf Systems
Many devices for keeping records on individual cards and sheets. The "modern way."

Our newly-equipped office and systematic methods are at your service



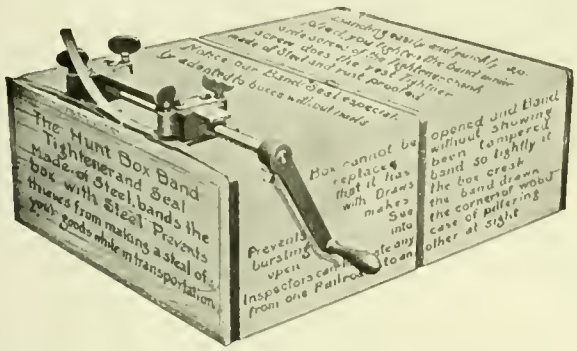
PRENTICE BROTHERS CO., WORCESTER, MASS.

Made In Worcester.

Upright and Radial Drilling Machines and Engine Lathes

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication

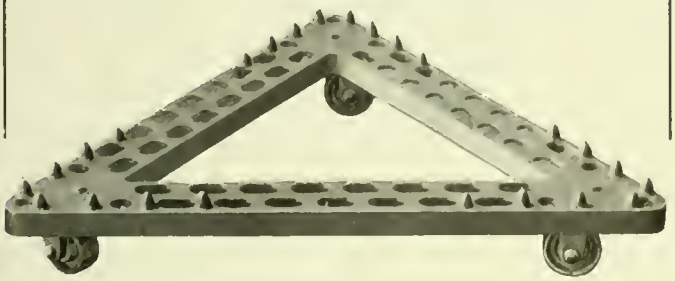
Put Your Bands on Tight



Patent Applied for.
THE HUNT BOX BAND TIGHTENER AND SEAL
Preserves Package and Prevents Thieving.
GET ONE

The Hunt Truck

STRONG DURABLE



All parts made of steel. All wheels and casters have roller bearings

CAPACITY, 1000 POUNDS

Galvanizing Department: Our alloy, zinc with steel, process has no superior

Hunt Metal Corner Co.

23 E. Main St., Westboro, Mass.

Schultz & Guthrie

High Grade Ladies' and Misses' Dresses

WORCESTER, MASS.

Telephone 5542

MANUFACTURERS
OF
"GOOD SERVICE"
LADIES' AND MISSES'
DRESSES

OFFICES:

NEW YORK	18 West 27th Street
BOSTON	523 Washington Street
CHICAGO	225 Dearborn Street
DETROIT	30 Watson Street
DENVER	214 Colorado Building

P. W. WOOD LUMBER CO.

WHOLESALE and RETAIL

GARDEN STREET

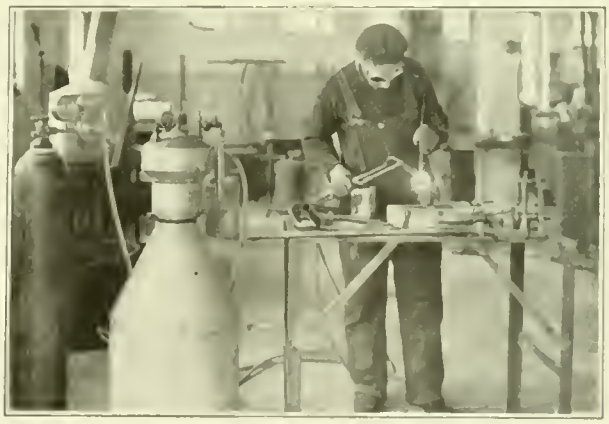
WORCESTER, - - MASS.

Telephone 4720-4721

We use Southard's Telegraph Code.

COMMONWEALTH MOTOR MART

22 COMMERCIAL ST. E. O. WHEELER, Manager



Oxy-Acetylene Welding Department

EXPERT AUTO REPAIRING

Storage

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

are after the largest possible production from your grinding machines.

The grinding wheel controls the production of both the grinding machine and the man operating it.

It is, therefore, a matter of getting a wheel made of the right "grit" and in the right grain and grade, and *not* a matter of saving a few pennies on the first cost of the wheel, or by using a wheel that is too hard so that it will not wear so fast.

Norton Grinding Wheels are made of the right grit—an electric furnace product that is sharper, more uniform and superior in every way to any natural abrasive.

They will enlarge your grinding output.

Norton Company

Worcester
Main Works

New York
50 Church Street

Chicago
11 North Jefferson Street

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

OUR LEADERS

Old Reserve Whiskey

Old February Punch

Budweiser, Original

Schlitz Brewery Bottling

Narragansett Select Lager

Rueter's Sterling Ale

E. S. Pierce Co.

69-71-73 Mechanic St., 40 Mercantile St.

Worcester, Mass.

Everything from the idea to the finished product

Advertising Specialties in Relief

Relief advertising is the cheapest and most effective way to keep a standard article before the public. Let me prove this to you.

Modeling - Carving

F. C. HAMILL

94 Commercial St. Worcester, Mass.

Made in Worcester.

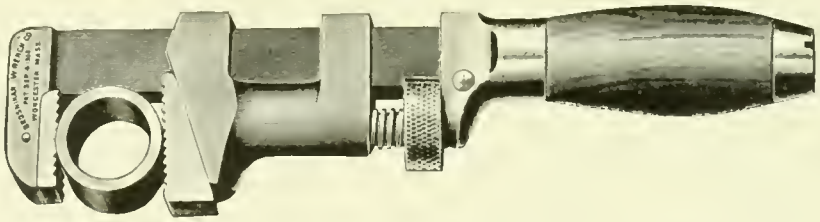
G. E. Stimpson & Co.

57-61-65 Pleasant Street

Worcester, Mass.

A large variety of up-to-date office furniture and appliances always in stock

Look at the Wedge-Shaped Jaw



☞

¶This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶Extra jaws may be sent by mail for *two-cent stamp.*

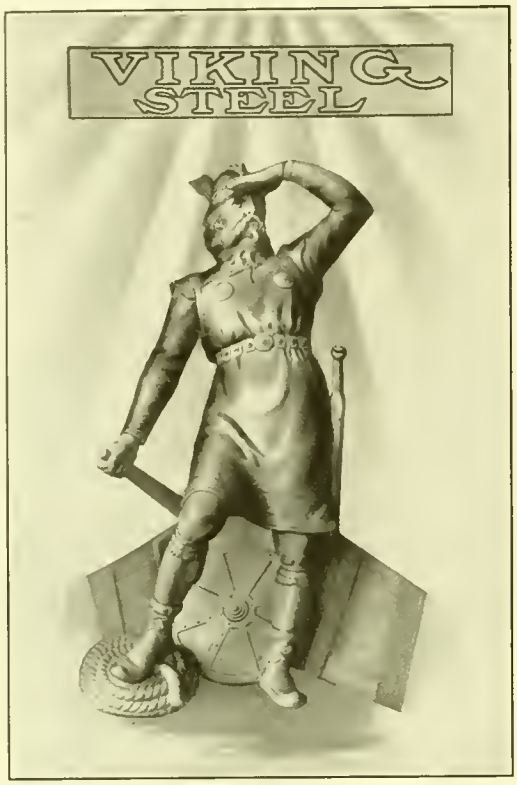
¶All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&·Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THERE is a subtle charm and grace about all

BON TON
CORSETS

which appeals to your finer tastes and excites your admiration and fancy. BON TON Corsets are *absolutely without a rival*, each model an original conception of surpassing excellence in every detail. Batiste or coutil.

PRICES $3 to $15

BOSTON STORE
Denholm & McKay Co.

ALSO SOLE WORCESTER AGENTS FOR

Royal Worcester Corsets $1 to $3
and Adjusto Corsets $3 and $5

AUTO COATS
NORFOLK SUITS
FINE WOOLENS
GAMBS BROTHERS
MERCHANT TAILORS
12 PLEASANT STREET
WORCESTER, MASS.

BIRD NEPONSET PRODUCTS

Bird Neponset Roofings

BIRD NEPONSET PRODUCTS

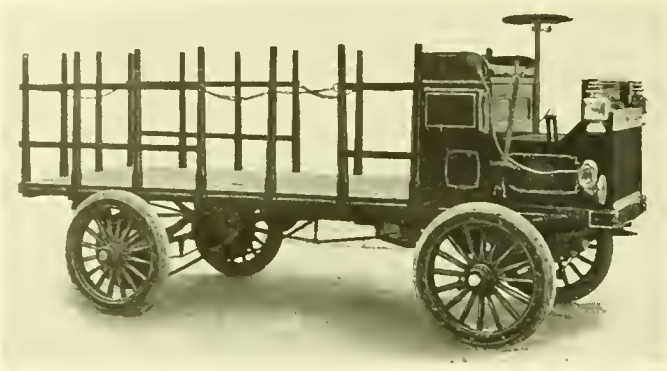
A Roofing for Every Type of Building

Paroid Roofing
For Barns and General Farm Buildings

Proslate Roofing
Artistic - Durable - Looks Like Shingles
Wears Like Slate

DUNCAN & GOODELL CO.
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Johnson Service Company
Express Wagons and Motor Trucks
Warranted Perfect for
ONE FULL YEAR
1000 lbs. to 5 tons $1400 to $3250
All 4-Cylinder Power Plants and 3-Speed Transmissions
J. H. Watson, 54 Hermon Street
Sole Worcester County Agent

Automobile Repairing. Special Machinery
Machine Repairing Sprocket and Gear Cutting

IS YOUR ROOF ON TIGHT?

THE GEORGE W. CARR CO.
(H. C. WILSON)
ENGINEERS AND CONTRACTORS
WORCESTER

"BARRETT SPECIFICATION" (For Tar and Gravel Roofs) Send for our Booklet on the subject.

LOGAN STEAM COAL

The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.
Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THIS is a reproduction of a scenic frieze with a non-repeating background effect—one of many practical and artistic novelties to be found in the 1910 line of the

SOLD BY ALL OF THE LEADING DEALERS

ALLEN-HIGGINS WALL PAPER COMPANY
WORCESTER, MASS.

HOTEL STANDISH

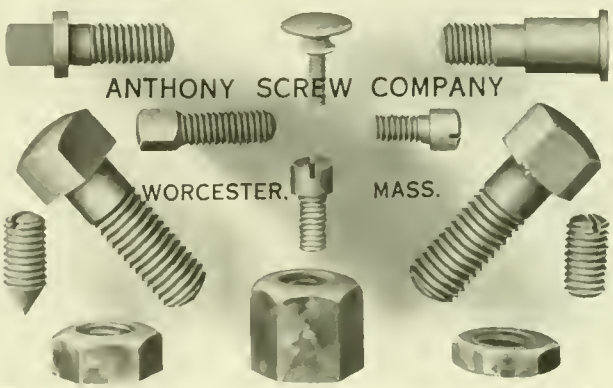
WORCESTER, MASS.

NEW AND ATTRACTIVE

Permanent and transient guests accommodated
On direct route between Boston and New York. First-class garage nearby.
Rooms with or without baths.

Inquire for rates.

R. L. PRENTICE, *Proprietor*
J. McWALTER, *Manager*



Office Position Exchange

For supplying OFFICE ASSISTANTS of all kinds: one of the better kind—one that is of real assistance to the employer where each applicant's case is very carefully considered.
An agency from which an employer can expect REAL help.
No charge is made to employers for the service.
Ask to have me call upon you.

Ralph H. Howe

518 Main Street, :: :: Worcester, Mass.
Telephone 3292-2

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

LEE, HIGGINSON & CO.

INVESTMENT SECURITIES

338 MAIN ST., WORCESTER, MASS.

We buy and sell Bonds suitable for Trustees and Administrators, and deal in Non-Taxable Stocks of long standing and proven value

W. F. Crosby

311 Main Street Telephone 4090 Worcester, Massachusetts

518 MAIN STREET
BUILDERS' EXCHANGE

TELEPHONES Office 744 / Residence 3126-1

GEORGE KINGSTON

Complete Services Rendered for Developing Property
Estimates made from Plans Buildings Appraised
Building Material Scheduled Building Inspection
Estimates on Fire Losses and Damage Claims

REAL ESTATE & INVESTMENTS

31 YEARS' EXPERIENCE

WORCESTER, MASS.

When you want an expert BOOKKEEPER or STENOGRAPHER—Call up

TYLER'S BUSINESS COLLEGE

which thoroughly trains young people to perform properly and successfully the work required in business life. Hundreds of our students are now in good positions in Worcester, and there is an increasing demand for others as competent. . . . . .

MULTIGRAPHING A SPECIALTY

EDNA I. TYLER, Principal.
Telephones 5012-6337.

SLATER BUILDING
Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

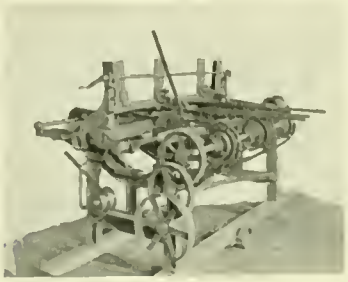
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



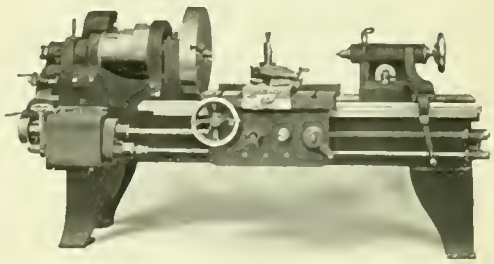
COMMERCIAL PHOTOGRAPHY.

DAVIS & RIGGS
306 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

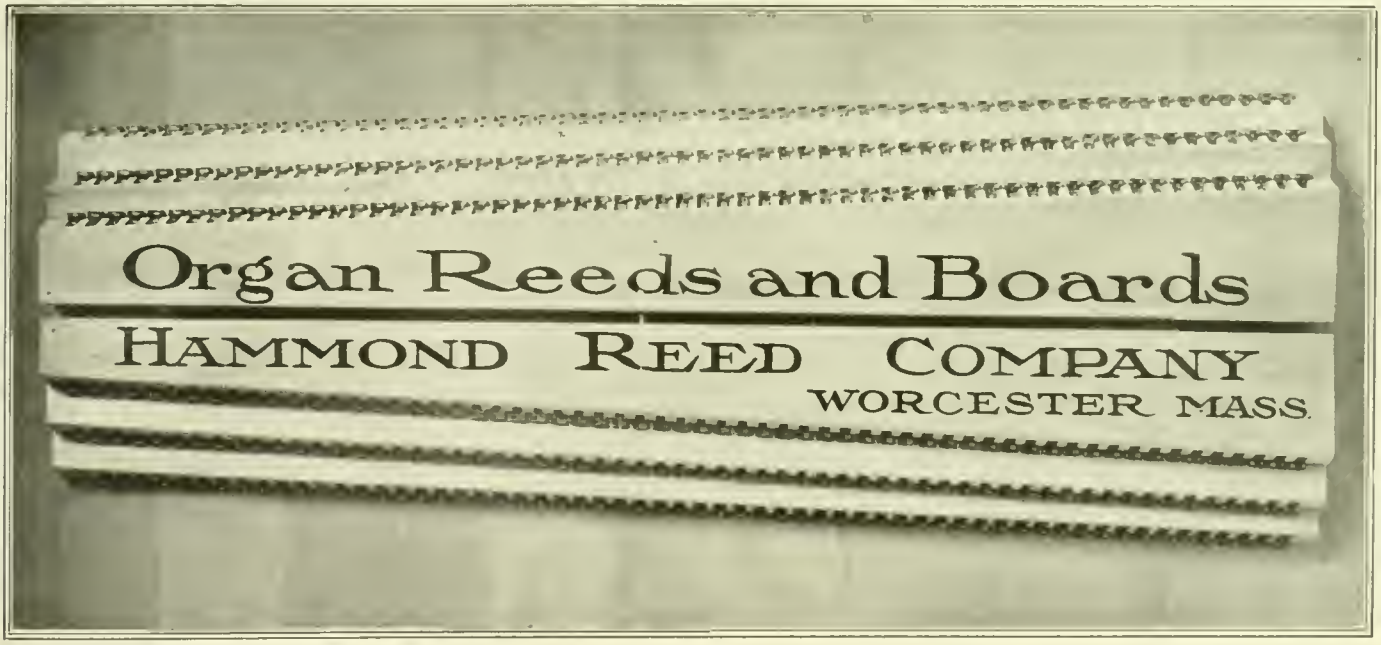


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all descriptions

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars
Ferrules and
Sheet Metal Specialties
Case Hardening
Nickel, Copper and
Brass Plating
also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

MANUFACTURERS, ATTENTION

All metal parts which have been broken, worn, or are otherwise defective can be made as good as new by our new Welding process. (Do not confuse this with brazing.)

We can save you the cost of a new part and its necessary fitting, as well as reduce loss of time. We weld cast iron, steel, brass, copper, cast steel, aluminum, and other metals.

We make a specialty of Automobile Cylinders and can weld cracked water jackets, broken flanges, cylinder walls, defective valve seats and any other parts made of cast iron. Metal can be added to any cast iron part to increase its strength.

We do not confine our work to automobile parts, however. Send all breakages from home or factory.

CENTRAL AUTOGENOUS WELDING COMPANY

73 UNION STREET, WORCESTER, MASS.

TELEPHONE 3412

A. E. HAYER

Carriage and Wagon Building

CARRIAGES AND AUTOMOBILES REPAIRED AND PAINTED

548 Park Ave., near Coes Sq.
Worcester, Mass.

TELEPHONE 1816

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, Hewett's Private Stock Rye

Iroquois Bohemian Lager, Frank Jones' Golden Ale

and the

Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street

Telephone 2455 *Worcester, Mass.*

M. D. HOLMES & SONS COMPANY

PLUMBING INSTALLATION

PLUMBING OUTFITS
HEATING SYSTEMS
FINE SHEET METAL WORK

PIPING CONSTRUCTION

WORCESTER, MASSACHUSETTS
SALEM SQUARE

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

New Banquet Hall or Tea Room at the Warren

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

New Park Hotel

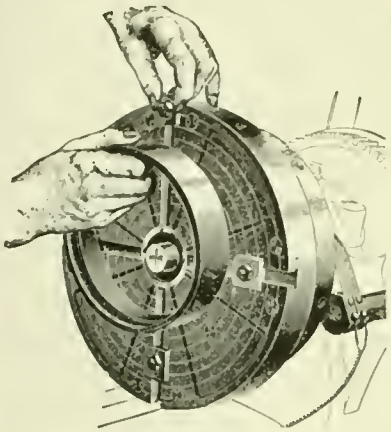
Opposite City Hall Park

A new main dining-room and a new office, both on the street floor, have just been finished, and modern elevator service installed. All the old coziness and more comfort.

57 Park Street
Worcester, Massachusetts

John F. Kelleher, *Manager*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 MASS.

Made in Worcester.

If you buy one barrel of this we know you will come again. It is of the same high quality that distinguishes all our oils and greases.

E. A. Buck & Company

East Worcester and Casco Streets
Worcester, Mass.

Palmer, Mass.

Buck's Best Auto Oil

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street, Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, 33
Allen-Higgins Wall Paper Company, 27
American Car Sprinkler Co., car sprinklers, 5
Anthony Screw Co., 27
Blake, Jr., & Co., George F., iron and steel, and supplies, 21
Blanchard & Co., F. S., printers, Inside back cover
Brosnihan Wrench Co., 23
Buck & Co., E. A., oils and gasoline, 33
Carlton Engraving Co., 17
Carr Co., George W., granolithic and concrete work, 26
Central Autogenous Welding Co., 30
Chalin-Sumner Coal Co., 16
Coates Clipper Mfg. Co., flexible shafting, 10
Commonwealth Motor Mart, 21
Commonwealth Press, printers, 8
Crompton & Knowles Loom Works, looms, Inside back cover
Crosby, W. F., bonds, 28
Davis Press, 20
Davis & Riggs, commercial photographers, 29
DeLong, W. H., dental disks, 33
Draper, Walter E., florist, 20
Duncan & Goodell Co., hardware, 25
Gambs Brothers, merchant tailors, 25
Golbert Last Company, Back cover
Graton & Knight Mfg. Co., The, leather belting, 8
Hammond Reed Co., organ reeds, reed boards, organ supplies, 29
Hamill, L. C., 23
Harrington & Richardson Arms Co., firearms, Inside front cover
Hayer, A. E., carriage builder, 30
Heald Machine Co., The, machine tools, grinding machines, 9
Hewett Co., Geo. F., 31
Heywood Boot & Shoe Co., fine shoes, 1
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, 5
Hobbs Mfg. Co., wood-working and box-making machinery, 5
Holmes & Sons, M. D., heating systems, 31
Howard Bros. Mfg. Co., 2
Howard-Wesson Co., Inc., 10
Howe, Ralph H., 27
Hudson Belting Co., leather belting, 33
Hunt Metal Corner Co., 21
Jackson St. Foundry, iron castings, 17
Johnson, Mauritz, upholstery, 20
Joliet Manufacturing Co., power corn shellers, 13
Jones Supply Co., Writerpress, 11
Kidder, R. E., drawing tables, 5
Kingston, George, real estate, 28
Lee, Higginson & Co., securities, 28
Luce, E. B., commercial photographer, 29
Marsh, B. F., lime and cement, 15
Matthews Mfg. Co., stove trimmings, ferrules, etc., 30
Merchants National Bank, Inside front cover
Morgan Construction Co., rolling mill equipment, Back cover
Morgan Spring Co., Back cover
Mosher Real Estate Co., 16
Multiple Woven Hose & Rubber Co., fire hose and belting 34
New England Audit Co., 11
New England Telephone & Telegraph Co., 18
New Park Hotel, 32
Norcross Brothers Co., contractors and builders, 2
Norton Company, grinding wheels, 22
Norton Grinding Co., grinding machines, 12
People's Savings Bank, 10
Pierce Co., E. S., wines, 23
Pond Machine & Foundry Co., 30
Powers Company, F. E., coal, 26
Pratt & Inman, iron and steel, 24
Prentice Bros. Company, drilling machines, engine lathes 20
Provident Life & Trust Co., 11
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., 7
Reidy, Maurice F., real estate, 11
Rix, Anson, picture frames, 7
Royal Worcester Corset Co., 25
Sargent & Son, J. W., carriages, 17
Sawyer Lumber Co., W. H., 16
Schultz & Guthrie, ladies' dresses, 21
Smith Co., E. T., 32
Smith-Green Co., The, lime, cement, 14
Spencer Wire Co., wire and wire articles, wire fences, 7
Standard Foundry Co., iron castings, 17
Standish Hotel, 27
State Mutual Life Assurance Co., 3
Stimpson & Co., G. E., office furniture, 23
Stockbridge Machine Co., shapers, 8
Stone, J. E., paper, 13
Stone & Foster Lumber Co., 24
Tyler's Business College, 28
Union Water Meter Co., 6
United States Envelope Co., 6
Walker & Co., O. S., chucks, 33
Warren Hotel, The, 32
Warren, J. F. & W. H., leather belting and mill supplies, 29
Watson, J. H., motor trucks, 26
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, 31
Williams & Bridges, wooden and paper boxes, 7
Winslow Skate Co., ice and roller skates, 19
Wire Goods Co., wire hardware, 10 and Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., 13
Wood Lumber Co., P. W., 21
Woodward & Powell Planer Co., light and heavy planers, 9
Worcester Art Museum School, 11
Worcester Business Institute, 11
Worcester Gear Works, Back cover
Worcester Machine Screw Co., set, cap and machine screws 19
Worcester National Bank, 3
Worcester Trust Co., 1
Wright Co., M. S., vacuum cleaners, 19
Wright Wire Co., wire and wire cloth, wire rope, etc. 1
Wyman & Gordon Co., drop forgings, Inside front cover

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal King Travelers Belt Hooks
Mill Wire Goods

84 Austin St., Worcester, Mass.

Made in Worcester.

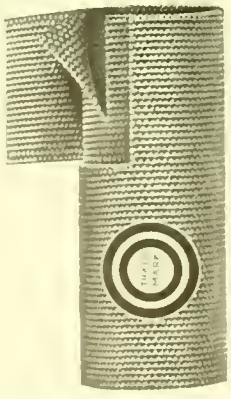
Learn Wireless and Railroad Telegraphy

Shortage of fully 10,000 operators on account of eight-hour law and extensive "wireless developments"

We operate under direct supervision of telegraph officials and positively place all students when qualified. Write for catalogue.

National Telegraph Institute

Cincinnati, Philadelphia, Memphis, Davenport, Ia.
Columbia, S.C., Portland, Oregon



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

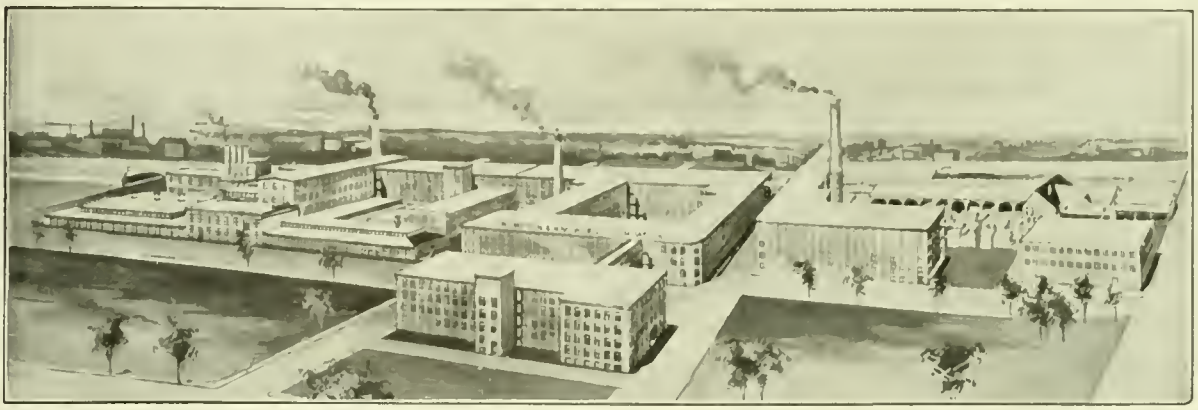
SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC



WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

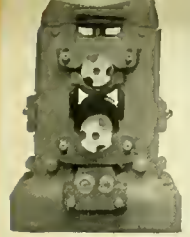
CROMPTON & KNOWLES LOOM WORKS,

WORCESTER, PROVIDENCE AND PHILADELPHIA.

IMPLICIT CONFIDENCE

CONFIDENCE is the corner-stone of business. The "confidence game" is eminently proper, provided the confidence is never betrayed. Some men have lost confidence in everybody; they are so suspicious that they cannot even trust themselves. Some of our best and oldest customers send us their printing jobs with no further stipulation than to "go ahead and get it out at the lowest price consistent with good work." It goes without saying that we have never betrayed such confidence by overcharges. Have you that much confidence in your printer? Can you trust everything to him? If not, you'd best make a change; for you are doing both yourself and the printer an injustice.

THE BLANCHARD PRESS WORCESTER, MASS.

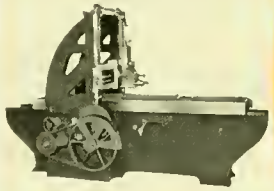


MILL EQUIPMENT, ETC. GAS PRODUCERS

MORGAN CONSTRUCTION COMPANY

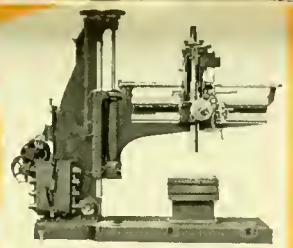
STATE MUTUAL BLDG.

PLANERS and LATHES



WHITCOMB-BLAISDELL MACHINE TOOL COMPANY

ROYAL WORCESTER CORSET CO.



DRILLING MACHINES
ENGINE LATHES

PRENTICE BROS. CO.

SLATER BLDG.

& POWELL PLANER CO.

"WORCESTER-MADE" INVITES TRADE

THE GRATON & KNIGHT MFG. CO.

WORCESTER, MASS. U.S.A.

COATES' CLIPPERS AND FLEXIBLE SHAFTS

"WORCESTER-MADE" INVITES TRADE

ORGAN REEDS
HAMMOND REED COMPANY

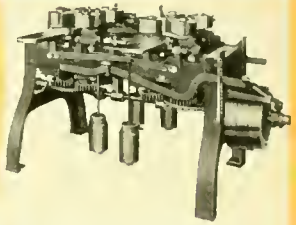
FOR ALL MOTOR CARS

OILZUM

THE WHITE & BAGLEY CO.

"WORCESTER-MADE" INVITES TRADE

GUNS
REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.



BOX MACHINERY
HOBBS MANUFACTURING COMPANY

MORGAN SPRING CO.

WIRE, SPRINGS AND WIRE SPECIALTIES

CITY HALL

SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS

FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE

GOVERNMENT BLDG.

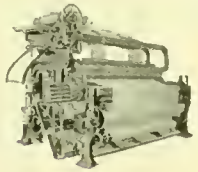
Golbert Last Co.

"BI-MOORE" BEST HOSE

MULTIPLE WOVEN HOSE & RUBBER CO.

SPENCER WIRE CO.

LOOMS FOR ALL PURPOSES



CROMPTON & KNOWLES LOOM WORKS

NORTON GRINDING WHEELS

MADE OF ALUNDUM

TRADE MARK NORTON REGISTERED

SOLD ALL OVER THE WORLD

NORTON COMPANY

AMERICAN STEEL & WIRE CO.

Heywood Boot & Shoe Co.

WORCESTER GEAR WORKS

WINSLOW'S Skates

THE BEST ICE AND ROLLER SKATES

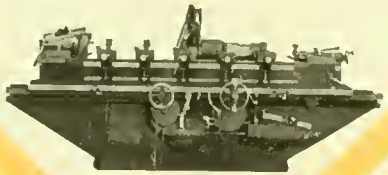
GOOD ENVELOPES

UNITED STATES ENVELOPE CO.

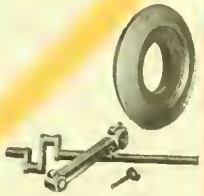
ART
NOVELTIES
VALENTINES

THE GEORGE C. WHITNEY COMPANY

NORTON GRINDING MACHINES

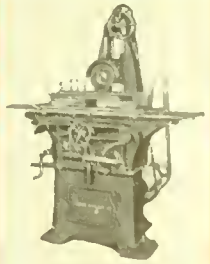


NORTON GRINDING CO.



The WYMAN & GORDON CO.
DROP FORGINGS

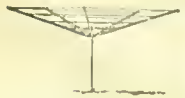
O. S. WALKER & CO.



SURFACE GRINDERS AND MAGNETIC CHUCKS

ORGAN Reeds

Hammond Reed Co.



HILL DRYER CO.

Everything in Wire

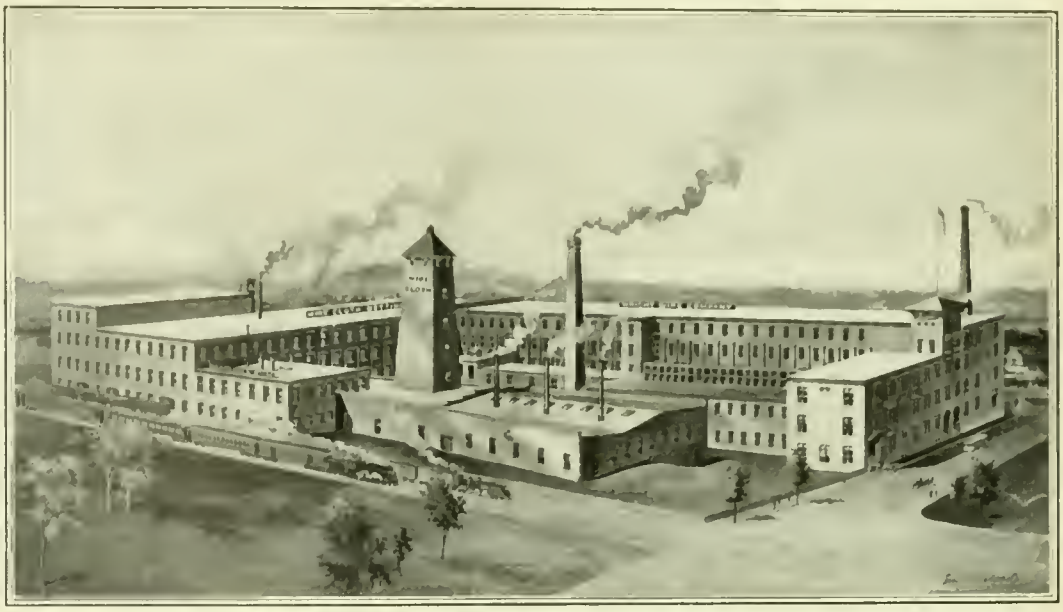
TRADE MARK

The Wire Goods Co.

WIRE

OF ALL KINDS

Wire Cloth
Poultry Netting
Wire Rope and Cable
Picture Cord
Coal and Sand Screens
Foundry Riddles
Elevator Cabs and Enclosures
Flower Bed Guard
Trellis and Ornamental Fencing

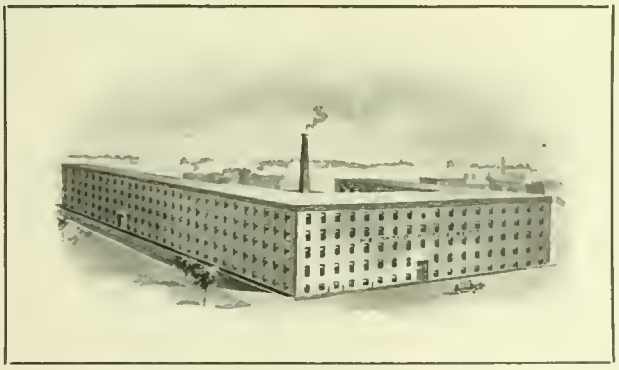


WORCESTER FACTORY

WRIGHT WIRE COMPANY

FACTORIES:
WORCESTER and PALMER, MASS.

Branch Warehouses: BOSTON, NEW YORK, PHILADELPHIA, CHICAGO, SAN FRANCISCO.



High Grade Shoes for Men

HEYWOOD TRADE MARK SHOE 1864

Factory and Main Office
70 Winter St., Worcester, Mass.

New York Office
127 Duane St., New York City

Retail Store
415 Main St., Worcester, Mass.

1864 **Heywood Boot & Shoe Co.** 1910

Manufacturers

Foreign Sales Agents

E. Coleman & Co., Manchester, England

Donnell & Palmer
Buenes Aires, Argentine Republic

Patterson & Ruhfus
Melbourne and Sydney, Australia

HEYWOOD TRADE MARK SHOE 1864

HEYWOOD TRADE MARK SHOE 1864

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

The Norcross Brothers Company

JOHN HAY MEMORIAL LIBRARY
Brown University, Providence, R.I.

Shepley, Rutan & Coolidge
Architects

The Norcross Brothers Co.
Builders

General Contractors and Builders

WORCESTER, MASS.

NEW YORK BOSTON
PROVIDENCE WASHINGTON

ESTABLISHED 1866
INCORPORATED 1888

A. H. Howard, *Pres. and Mgr.*
Herbert Midgley, *Supt.*

HOWARD BROS. MFG. CO.

Manufacturers of

Card Clothing, Hand Stripping Cards, German and Domestic Heddles

for Cotton, Woolen and Worsted Mills

Revolving Top Flats
remounted
Fillets redrawn

QUALITY is our
Inducement

Phone 1070
Local and Long Distance

Dept. C-H
44-46 Vine St.
Worcester, Mass.

Made in Worcester.

1909

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

State Mutual Life Assurance Company

(Incorporated 1844)

Assets, Jan. 1, 1910,	$34,681,951.04
Liabilities, Jan. 1, 1910,	$31,584,938.72
Surplus, Jan. 1, 1910,	$3,097,012.32

BURTON H. WRIGHT, President
A. G. BULLOCK, Vice-President
D. W. CARTER, Secretary
G. W. MACKINTIRE, Treasurer

EDGAR C. FOWLER, Supt. of Agencies

BARRETT & SNOW, General Agents,
306, 307, 308 State Mutual Bldg.

Worcester Massachusetts

11 Foster Street Worcester National Bank *Worcester, Mass.*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

61 CONTINUOUS ROLLING MILLS

OF OUR DESIGN AND MANUFACTURE

WHERE THERE HAS BEEN CHANGE OF OWNERSHIP THE NAME OF ORIGINAL PURCHASER IS GIVEN IN PARENTHESES

UNITED STATES AND CANADA

American Steel & Wire Co. (American Wire Co.)	Cleveland, O.	Rod Mill	1888	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Billet Mill	1901	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Rod Mill	1901	
American Steel & Wire Co. (Sharon Steel Co.)	Sharon, Pa.	Rod Mill	1901	
Atlanta Steel Co.	Atlanta, Ga.	Bar, Hoop, Tie and Rod Mill	1904	
Cambria Steel Co.	Johnstown, Pa.	Billet and Sheet Bar Mill	1909	
Cambria Steel Co.	Johnstown, Pa.	Rod Mill	1909	2nd ORDER
Carnegie Steel Co. (American Steel Hoop Co.)	Youngstown, O.	Hoop and Tie Mill	1894	
Carnegie Steel Co. (Ætna Standard I. & S. Co.)	Mingo Jct., O.	Merchant Mill	1895	
Carnegie Steel Co.	Duquesne, Pa.	Billet Mill	1897	
Carnenie Steel Co.	Duquesne, Pa.	Merchant Mill	1900	2nd ORDER
Carnegie Steel Co.	Duquesne, Pa.	Merchant Mill	1900	2nd ORDER
Carnegie Steel Co.	Duquesne, Pa.	Billet Mill	1900	3rd ORDER
Carnegie Steel Co. (National Steel Co.)	Youngstown, O.	Billet Mill	1900	
Dominion Iron & Steel Co.	Sydney, N. S.	Rod Mill	1903	
Dominion Iron & Steel Co.	Sydney, N. S.	Billet Mill	1903	2nd ORDER
Dominion Iron & Steel Co.	Sydney, N. S.	Merchant Mill	1910	3rd ORDER
Grand Crossing Tack Co.	Chicago, Ill.	Rod Mill	1899	
Grand Crossing Tack Co.	Chicago, Ill.	Steel Works and Billet Mill	1901	2nd ORDER
Illinois Steel Co.	Joliet, Ill.	Rod, Tie and Spike Rod Mill	1897	
Illinois Steel Co.	Milwaukee, Wis.	Roughing Mill	1901	2nd ORDER
Indiana Steel Co.	Gary, Ind.	24″ Billet Mill	1907	
Indiana Steel Co.	Gary, Ind.	18″ Billet Mill	1907	
Indiana Steel Co.	Gary, Ind.	18″ Sheet Bar Mill	1910	2nd ORDER
Inland Steel Co.	Indiana Harbor, Ind.	Merchant Mill	1906	
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Billet Mill	1892	
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1893	2nd ORDER
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1898	3rd ORDER
Jones & Laughlin Steel Co.	Pittsburg, Pa.	Merchant Mill	1898	3rd ORDER
Jones & Laughlin Steel Co.	Aliquippa, Pa.	Rod Mill	1909	4th ORDER
Jones & Laughlin Steel Co.	Aliquippa, Pa.	Billet and Sheet Bar Mill	1909	5th ORDER
Lackawanna Steel Co.	Buffalo, N. Y.	Merchant Mill	1904	
Lackawanna Steel Co.	Buffalo, N. Y.	Billet and Sheet Bar Mill	1906	2nd ORDER
Lackawanna Steel Co.	Buffalo, N. Y.	Merchant Mill	1910	3rd ORDER
Oliver Iron & Steel Co.	Pittsburg, Pa.	Merchant Mill	1892	
Pittsburg Steel Co.	Monessen, Pa.	Billet Mill	1908	
Pittsburg Steel Co.	Monessen, Pa.	Rod Mill	1908	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	
Republic Iron & Steel Co.	Youngstown, O.	Roughing Mill	1902	2nd ORDER
Republic Iron & Steel Co.	Moline, Ill.	Roughing Mill	1902	3rd ORDER
Republic Iron & Steel Co.	Youngstown, O.	Skelp Mill	1909	4th ORDER
Republic Iron & Steel Co.	Youngstown, O.	Billet and Sheet Bar Mill	1909	5th ORDER
Sharon Steel Hoop Co.	Sharon, Pa.	Roughing Mill	1904	
Upson Nut Co.	Cleveland, O.	Merchant Mill	1910	
Wickwire Brothers	Cortland, N. Y.	Rod Mill	1901	
Wisconsin Steel Co. (Deering Harvester Co.)	So. Chicago, Ill.	Merchant Mill	1902	
Wisconsin Steel Co. (International Harvester Co.)	So. Chicago, Ill.	Merchant Mill	1906	2nd ORDER
Youngstown Sheet & Tube Co.	Youngstown, O.	Billet Mill	1905	
Youngstown Sheet & Tube Co.	Youngstown, O.	Sheet Bar Mill	1905	
Youngstown Sheet & Tube Co. (Morgan Spring Co.)	Struthers, O.	Rod Mill	1905	
Youngstown Sheet & Tube Co.	Youngstown, O.	Skelp Mill	1906	2nd ORDER

EUROPE

Alpine Montan Gesellschaft	Donawitz, Austria	Rod Mill	1907
Georgs-Marien-Bergwerks & Huetten-Verein	Germany	Merchant Mill	1905
Gewerkschaft Deutscher Kaiser	Dinslaken, Germany	Hoop Mill	1903
Guest, Keen & Co.	England	Roughing Mill	1899
J. Mouton	Paris, France	Rod Mill	1903
Rheinische Stahlwerke	Meiderich, Germany	Merchant Mill	1903
Societe Anonyme d'Ougree-Marihaye	Ougree, Belgium	Rod Mill	1906
Vereinigte Koenigs-& Laurahuette, A. G.	Koenigshuette, Germany	Bar, Hoop, Tie and Rod Mill	1906
Whitehead Iron & Steel Co., Ltd. (L. D. Whitehead & Co.)	Tredegar, England	Bar, Hoop, Tie and Rod Mill	1906

MORGAN CONSTRUCTION CO.

WORCESTER, MASSACHUSETTS

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Over 500,000 Users Testify to the Merits of

HILL'S CLOTHES DRYERS

SEND FOR ILLUSTRATED BOOKLETS

HILL'S CHAMPION LAWN CLOTHES DRYER

Made in Worcester.

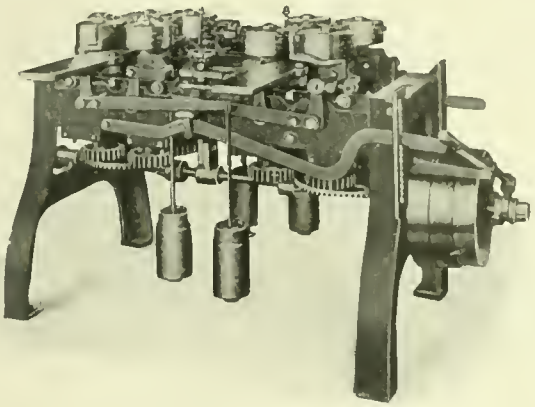
HILL'S BALCONY CLOTHES DRYER

THE HILL-CANTON SANITARY LAUNDRY DRYER

HILL DRYER CO.
Worcester, Mass.

The Largest Manufacturers of Clothes Dryers in the World

SHIPPING CASES AND BOXES



Power Feed Box Board Matcher

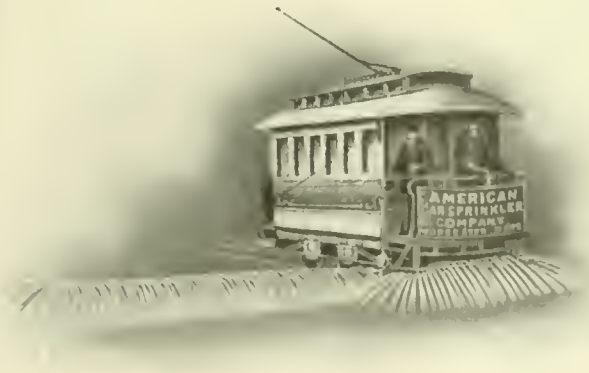
Everything needful for making
Wooden Boxes and Cases
Planing Machines
Sawing Machines
Fitting Machines
Trimming Machines
Matching Machines

HOBBS MANUFACTURING CO.

Made in Worcester.

26 SALISBURY STREET, WORCESTER, MASS.

TO LAY THE DUST



AMERICAN CAR SPRINKLER CO.

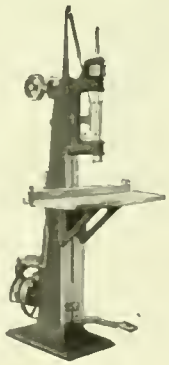
WORCESTER, MASS., U. S. A.

Made in Worcester.

Found at Last!

A boring machine for wood built on the right principle. Workmanship and material the best. New features

Send for circular



R. E. KIDDER

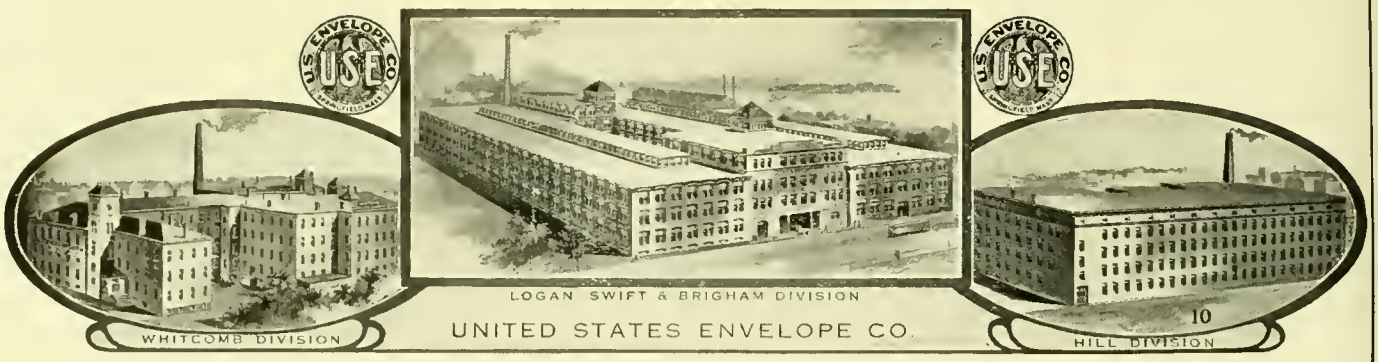
13 Hermon Street Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser

United States Envelope Company

Manufacturers of Standard **Envelopes**



The Outlook Envelope

Insures economy and absolute accuracy in the addressing of all your mail matter.

The Improved

Columbian Clasp Envelope

The best and most satisfactory merchandise envelope made.

Specialists in STEEL DIE STAMPING

or Commercial Work. Samples and Prices of our Standard Goods furnished by your Stationer or Printer

Made in Worcester.

FOREIGN EXCHANGE

Safe Deposit Boxes

ACCOUNTS SOLICITED

MERCHANTS NATIONAL BANK

WORCESTER, MASS.

F. A. DRURY, President
C. A. EVANS, Vice-President

A. G. DAVIS, Cashier
C. S. PUTNAM, Assistant Cashier

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Makers of
Wood Screws
Machine Screws
Taps and Dies
Stove Bolts
Tire Bolts
Cap Screws
Set Screws
Small Nuts
Rivets and Burs
Hanger Bolts
Chair and Stove Rods
Screw Machine Products
Special Products from Wire
Sheet Metal and Castings

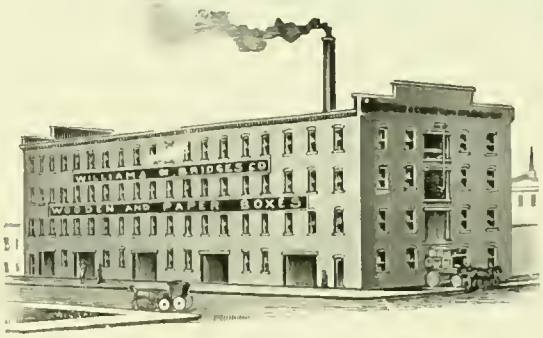
Made in Worcester.

REED & PRINCE MFG. CO.
Worcester, Mass., U. S. A.

ANSON F. RIX
PICTURE FRAMES
WHOLESALE AND RETAIL

1 Green Lane WORCESTER, MASS.

EVERY VARIETY
of WOODEN *and* PAPER
ALSO CLOTH COVERED BOXES



BOXES

One of the Most Complete Plants in Massachusetts
WILLIAMS & BRIDGES CO.
Manufacturers
72-86 Central St., Worcester, Mass.
Made in Worcester.

ESTABLISHED 1820

WIRE
OF ALL KINDS

SPENCER WIRE CO.
WORCESTER
MASS.

NEW YORK ST. LOUIS CHICAGO
BOSTON PHILADELPHIA

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May We Present You with this Book?

This Eighty-Page Book

overflows with just the kind of information that is constantly needed by every one who uses or sells belting and its associated products.

It tells you how to obtain the greatest efficiency from Leather Belting.
It illustrates and describes the various cuts of market leather.
It pictures a variety of leather strappings, halters and automobile leathers.

Do you want a copy? Write or 'phone us.

THE GRATON & KNIGHT MFG. CO.,
WORCESTER, MASS.

BRANCHS:

Atlanta, Ga., 93 95 Forsyth St.
Boston, Mass., 33 Lincoln St.
Chicago, Ill., 165 E. Lake St.
Milwaukee, Wis. 103 W. Water St.
Minneapolis, Minn. 310 Third Ave., No.
New York, N. Y., 72 Warren St.
Philadelphia, Pa., 132 N. Third St.
Portland, Ore., 51 First St.
San Francisco, Cal. 30-32 Fremont St.
Seattle, Wash., 219 Occidental Ave.
St. Louis, Mo., 619 N. 8th St.

Selling Agents for Texas,
GRATON & KNIGHT MFG. CO. OF TEXAS
141 N. Austin St., Dallas, Texas.

We have just the quality that will suit you

THE CLAFLIN-SUMNER COAL COMPANY

OFFERS WORCESTER'S MANUFACTURERS

CONSOLIDATION COMPANY'S
GEORGES CREEK CUMBERLAND,
WEBSTER SMOKELESS AND
BULAH COAL

This "Worcester Made Invites Trade" Company possesses both the connections and facilities for handling wholesale as well as retail tonnage.

WITH SHIPMENTS ARRIVING DAILY,
WE ARE TRULY "AT YOUR SERVICE"

LOOK FOR THE BIG

CLAFLIN-SUMNER COAL CO. No 9 Pleasant Street Worcester, Mass.

ON PLEASANT STREET

Art in Printing

The Commonwealth Press · Oliver B Wood · Worcester Mass

Are You on our List

Printing craft can accomplish nothing finer than the catalogs and booklets which go forth bearing our stamp.

If you have done business with us you know this to be true. If you have not, why don't you give us an opportunity to "show you"?

New Englanders are the most fastidious business men in the world. We have been pleasing them for nearly 30 years. This is a fair test.

A Monotype composing and casting equipment is a recent addition to our modern plant.

The Commonwealth Press
No. 50 Foster Street, Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Provident Life and Trust Co.

of Philadelphia

Jan. 1, 1910

Assets,	$69,610,599.93
Liabilities,	61,383,047.07
Contingency Reserve (including Capital of $1,000,000),	9,227,552.86
Business Written in 1909,	27,614,765.00
Insurance in Force,	217,778,809.00

Central Massachusetts General Agency

One of the largest Life Insurance Agencies in this section.

1909 business the largest in the history of this agency.

Lester V. Bailey, *General Agent*

W. Gray Harris, *Cashier* Guy Francis Wheeler, *Agency Special*

Offices, 420, 421, 422 Slater Building, Worcester.

Factory Systems

There are possibilities for improved methods and increased profits in YOUR business. Likewise, there are losses to be stopped and expenses to be eliminated, or reduced.

The Superintendent of our Engineering and System Department has had twenty-five years of experience in factory organization and systematization, and devotes his attention to this branch of our practice exclusively.

Simplicity is our slogan.

New England Audit Company

Springfield — Court Square Building

Worcester — State Mutual Building

Prospectus containing one hundred references mailed upon request.

Everything from the idea to the finished product

Advertising Specialties in Relief

Relief advertising is the cheapest and most effective way to keep a standard article before the public. Let me prove this to you.

Modeling - Carving

L. C. HAMILL

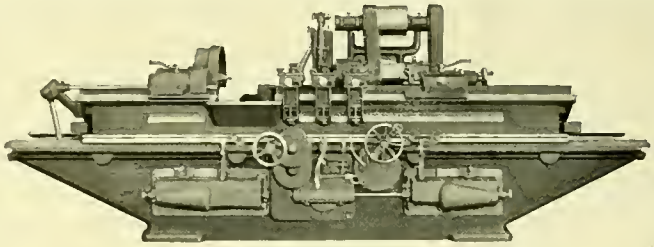
94 Commercial St. Worcester, Mass.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser and the publication.

Norton Gap Grinders

18 and 30 x 96 inch



Front View
18 and 30 x 96″ Self-Contained Gap Machine

are used in all the leading Railroad shops, and have proved beyond question their efficiency in Grinding Piston Rods with heads in place, Driving Axles, Truck Axles, Crank Pins and Valve Stems. Better work at reduced cost should interest every Railroad Master Mechanic and Superintendent of Motive Power

AGENTS

Vonnegut Hardware Co.
Indianapolis

Robinson, Carey & Sands Co.
St. Paul and Duluth

Manning, Maxwell & Moore
Pittsburg, St. Louis, Philadelphia, Atlanta

Prentiss Tool & Supply Co.
New York, Boston, Buffalo, Syracuse

Motch & Merryweather Mchy. Co
Cleveland, Detroit and Cincinnati

The Canadian Fairbanks Co.
Montreal, Toronto, Vancouver

Henshaw, Bulkley & Co.
San Francisco, Los Angeles

Alfred Herbert, Ltd.
Coventry, Eng

F. W. Horne
Yokohama, Japan

Norton Grinding Company

Worcester, Massachusetts

Chicago Store: 11 North Jefferson Street

37 N

THOMAS D. GALASINI

Real Estate and Mortgages

522 STATE MUTUAL BLDG., WORCESTER, MASS.

TELEPHONE 1625

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Incorporated 1868

Worcester Trust Company

Capital $500,000 Surplus $900,000
Total Resources $10,000,000

Transacts a General Banking business and is authorized also to act as Executor, Administrator and Trustee. Issues Letters of Credit, Foreign Exchange and Travelers' Checks

Main Office, 342-344 Main Street

City Hall Branch
448 Main Street :: :: :: Lincoln Square Branch
11 Main Street

Accounts Solicited

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Rebekah

Do you want the BEST that is made in

Secret Society Uniforms, Robes, Regalias and Badges?

Our 25 years' experience and unsurpassed factory facilities enable us to give you the BEST. Don't fail to write us for catalogue and prices.

COSTUME DEPARTMENT. Our stock of over a thousand costumes, together with wigs, beards and "make-up" of every description, affords ample variety from which to select everything necessary for plays, minstrels, masquerades and costume parties.

Ask for Costume Circular No. 25.

Fuller Regalia & Costume Company

654 Main Street, Worcester, Mass.

Established 1885

Guard

MORTGAGES

Mortgage investments made that will yield 7% on property of best character

MAURICE F. REIDY

Real Estate and Fire Insurance

Rooms 829-830 State Mutual Building

WORCESTER, MASS.

Telephones 4669—5207

C. B. Post, *Proprietor*

Let Me Solve Your Office Help Problem

We are turning out thoroughly equipped bookkeepers and stenographers by

Improved Systems Go Ahead Methods

Everything the best that money and brains can produce

The School of Experience

Worcester Business Institute

Telephone 5218

476 Main Street Opposite City Hall

ESTABLISHED 1868

THE SMITH-GREEN COMPANY

WORCESTER'S OLDEST AND MOST RELIABLE MASONS' SUPPLY HOUSE

PLASTER BOARD ELASTIC PULP PLASTER

METAL LATHING READY FINISH

THE MODERN MATERIALS FOR PLASTERING

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

W. H. Sawyer Lumber Co.

66 Lincoln St.
Worcester, Mass.

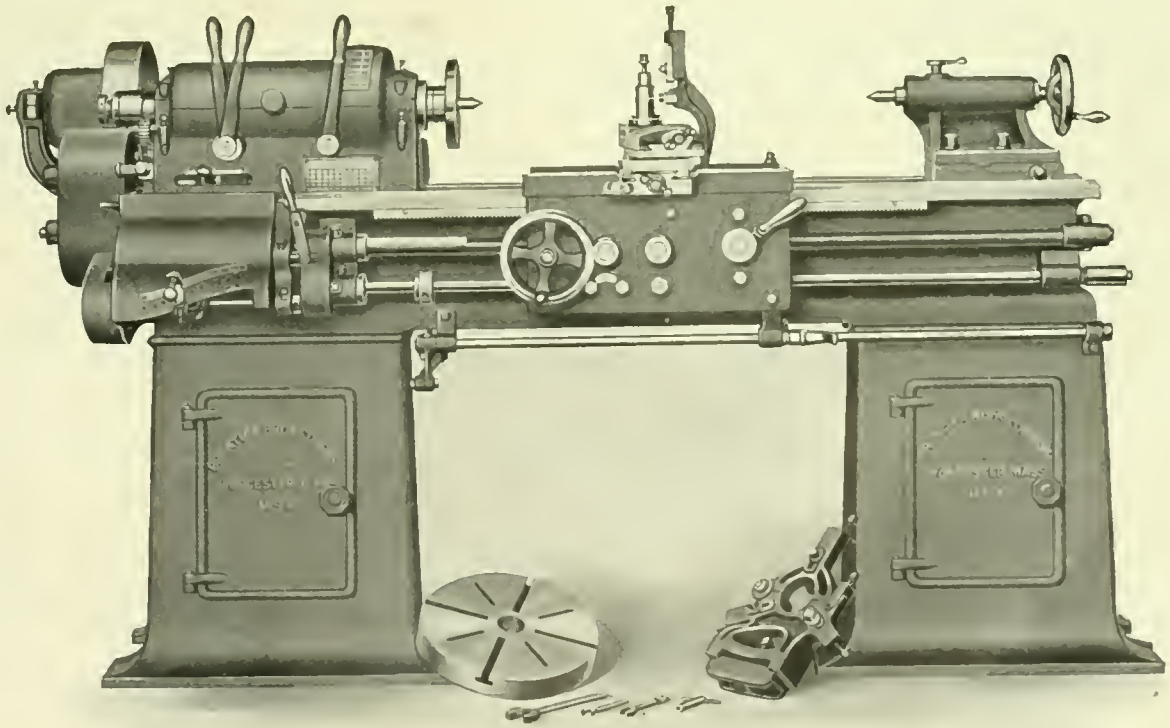
Book Plates

A gift de Luxe.

The finest of remembrances for book lovers, giving a distinctive and personal touch to one's books and library.

We are prepared to design, engrave and print book plates of unusual excellence.

Woodbury & Company
Incorporated
Artists, Engravers, Art Printers
Worcester, Massachusetts



PRENTICE BROTHERS CO., WORCESTER, MASS.

Made in Worcester.

Upright and Radial Drilling Machines and Engine Lathes

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

We buy and sell Bonds suitable for Trustees and Administrators, and deal in Non-Taxable Stocks of long standing and proven value

W. F. Crosby

311 Main Street Telephone 4090 Worcester, Massachusetts

When you want an expert Bookkeeper or Stenographer—Call up

TYLER'S BUSINESS COLLEGE

which thoroughly trains young people to perform properly and successfully the work required in business life. Hundreds of our students are now in good positions in Worcester, and there is an increasing demand for others as competent. . . . . .

Multigraphing a Specialty

EDNA I TYLER, Principal.
Telephones 5012-6337.

SLATER BUILDING
Worcester, Mass.

GENERAL CONTRACTING AND BUILDING
EXCAVATING OF ALL KINDS
CONCRETE AND GRANOLITHIC WORK
THREE-DECKERS A SPECIALTY
TIME AND CONSTRUCTION MORTGAGES

FRANK P. MOSHER

ROOMS 541-543 SLATER BLDG., WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

COMMONWEALTH MOTOR MART

22 COMMERCIAL ST. E. O. WHEELER, Manager

Oxy-Acetylene Welding Department

EXPERT AUTO REPAIRING

Storage

Jackson Street Foundry

Light and Heavy

Iron Castings

J. A. Colvin, *Proprietor*

52 Jackson Street, Worcester, Mass.

Made in Worcester.

P. W. WOOD LUMBER CO.

WHOLESALE and RETAIL

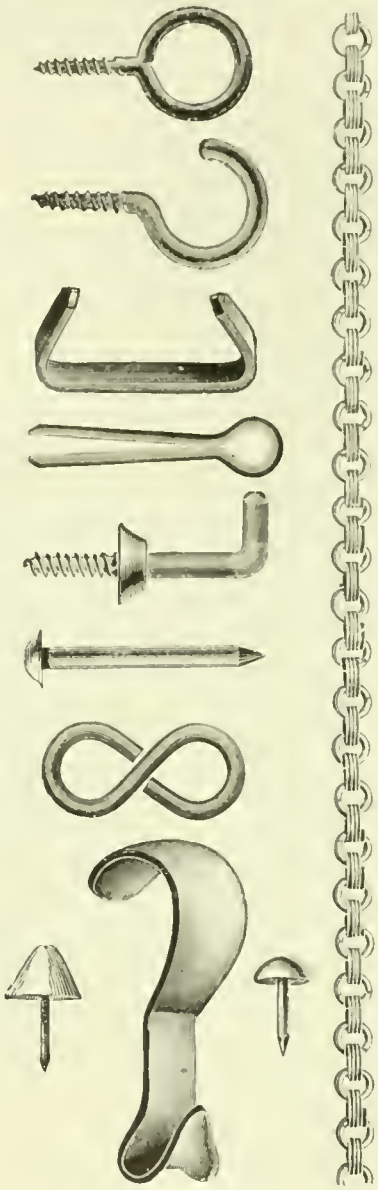
GARDEN STREET

WORCESTER, - - MASS.

Telephone 4720-4721

We use Southard's Telegraph Code.

PARKER Wire Goods Co.



IF there is anything wanted in the way of Wire Hardware which is not already a part of our extensive line, we can make it to special order. Our leading products are Bright Wire and Brass Screw Eyes and Hooks, Solid Brass Picture Hooks, Standard Brass and Iron Jack Chain, Plumbers' Safety Chains, "Eureka" Sash and Furnace Chain, "King" and "Vulcan" Coat and Hat Hooks, Drawer Pulls, Wrought Iron "S" Hooks, Wrought Eye Bolts, Hitching Rings, Hammock Hooks, and Dog Chains.

TO Hardware Dealers and Housefurnishers we will send a 200-page catalog free. This illustrates, describes and prices the entire Parker line. It is a valuable addition to the buyer's library.

PARKER
WIRE GOODS CO.
WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE yourself, the advertiser and the publication.

Private Line Telephones

Not Connected with "Central"

An Interior System for Offices, Factories, Residences

By "pressing a button" you automatically connect with the room or department to which you wish to talk. No operator required.

Keeps a business man in touch with every branch of his business every minute of the day.

No need of running up and down stairs or from one shop to another.

Invaluable to the mistress of a large household.

Either Wall or Desk Telephones furnished.

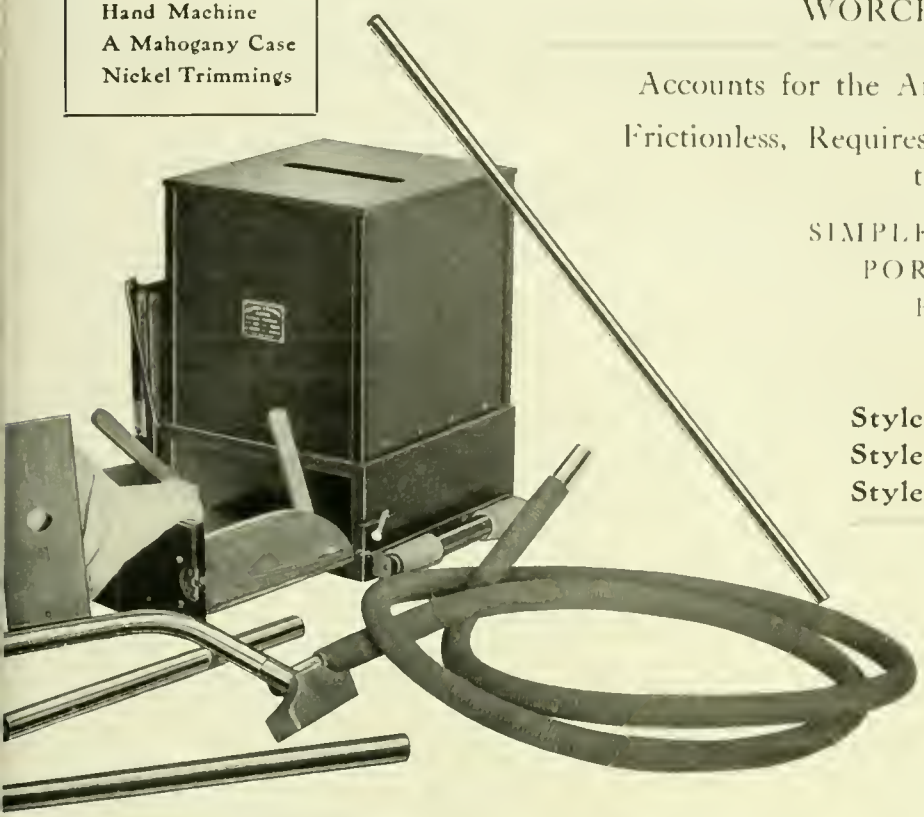
For estimates of cost, call our Local Manager, or write the Branch Exchange Department, 101 Milk Street, Boston.

New England Telephone and Telegraph Company

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

"PNEUVAC" VACUUM CLEANER

Hand Machine
A Mahogany Case
Nickel Trimmings



WORCESTER MADE

Accounts for the Amazing Sales of this Machine

Frictionless, Requires no Oil. Noiseless, a Pleasure to Operate

SIMPLE SCIENTIFIC
PORTABLE REASONABLE
POWERFUL EFFICIENT

Prices

Style A, Hand, as shown -	$30
Style C, Electric, Household, -	125
Style B, Electric, for Hotels, etc.	150

M. S. Wright Co.
Manufacturers
Worcester

Pneuvac Company
Blake Building
Boston, Mass.

Worcester Machine Screw Company
Standard Screw Company Successor
Set Cap and Machine Screws and Special Parts
Worcester, Mass.

Millions Wear

WINSLOW'S Skates

Catalogues Free

THE BEST ICE AND ROLLER SKATES

THE SAMUEL WINSLOW SKATE MFG. CO., Worcester, Mass., U. S. A.

New York, 84 Chambers Street. London, 8 Long Lane, E. C. Paris, 64, Avenue de la Grande Armée.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

MAURITZ JOHNSON

Upholstery
and
Drapery

Arcade, Slater Building
Rooms 200-201
Telephone 1085
Worcester, Mass.

Carnations

Walter E. Draper
FLORIST

752 Main Street Worcester, Mass.
Telephone 5464

HARRY C. GRAY, Manager. Formerly head of Boston Store flower department.

THE DAVIS PRESS

38 AND 44 FRONT ST., WORCESTER MASSACHUSETTS

Greetings

Our best wishes to all for a Joyous Christmas and a Year of Prosperity

Your friends will appreciate a Christmas Announcement such as we have designed in previous years

Let us suggest something original and effective. One design in particular which we sent out last year "caught the crowd"

Osgood Bradley Car Company

Worcester, Massachusetts

John E. Bradley, *President* New York Office, 170 Broadway

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

TRADEMARK
NORTON
REGISTERED

Knowledge of Grinding

is now recognized as a valuable machine shop asset. Every user of grinding wheels should send for Norton booklets on grinding and the use and care of grinding wheels.

Knowledge of grinding and grinding wheels leads to larger production and grinding economy. It also leads to the use of Norton Grinding Wheels. Send for booklet to

New York: 50 Church Street
Chicago: 11 North Jefferson Street
Niagara Falls, N. Y.: Alundum Plant

Norton Company
Worcester, Mass.

V6

Standard Foundry Company

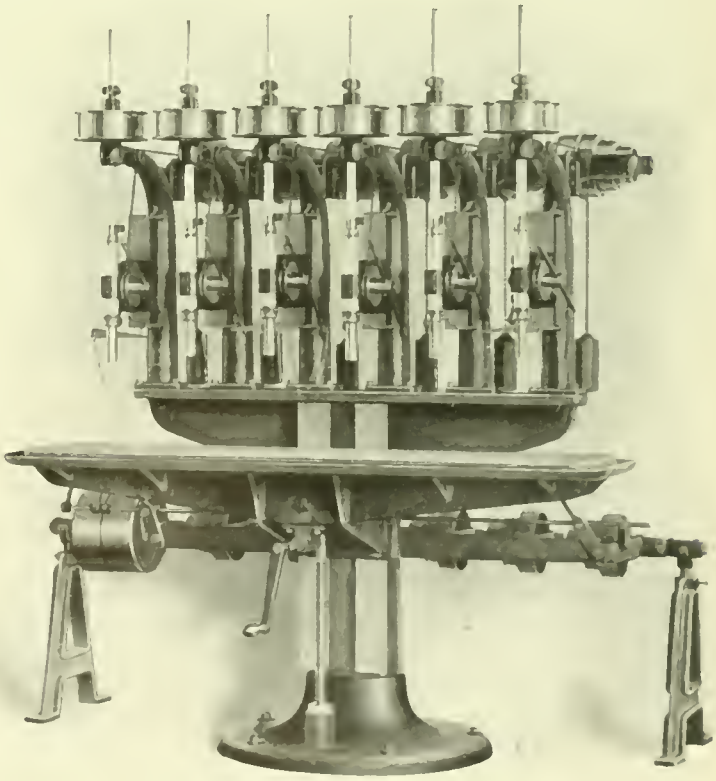
IRON FOUNDERS

Special attention given to the
Manufacture of High Grade

Machinery Castings

Tainter and Gardner Streets
Worcester, Mass.

Made in Worcester.



Everything in Sensitive Drilling Machines, including automatic tapping devices and power feeds
Write for circular

H. G. Barr, 21 Hermon Street Worcester, Mass.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ESTABLISHED 1829.

PRATT & INMAN

WORCESTER, MASS.

OUR STOCK COMPRISES THE LARGEST ASSORTMENT OF SIZES AND QUALITIES OF STEEL CARRIED BY ANY ONE IN THE UNITED STATES

SPECIALTIES:
BEST MACHINERY STEEL, LEAD SCREW STEEL
VIKING CRUCIBLE STEEL.

GEO·F·BLAKE·JR·&Co
WORCESTER, MASS.

ANGLES
AND
CHANNELS

BLACKSMITH
& CARRIAGE
HARDWARE,

JUNCTION OF BRIDGE,
MECHANIC AND FOSTER STREETS

MARCUS L. FOSTER, Pres. and Treas. HENRY H. DYKE, Gen. Manager

STONE & FOSTER LUMBER CO.

LUMBER

For All Purposes

Corner Central and Union Streets

Telephones 4380, 4381 WORCESTER, MASS.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

ROYAL WORCESTER *NON-RUSTABLE* CORSETS

For Fifty Years Universally Recognized as the World's Best *Medium Priced* Corsets

THE most valued charm of womanly beauty is a PERFECT FIGURE attained only through wearing a PERFECT CORSET correctly fitted.

ROYAL WORCESTER

corsets enhance and beautify every figure, moulding the form until it assumes the graceful and symmetrical lines of the ideal. All this and more is accomplished with ease and fully in accord with the laws of health and hygiene.

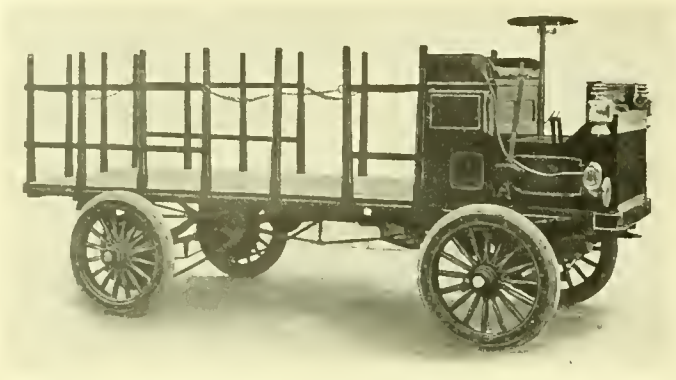
Ill-fitting, poorly-made corsets destroy the very charms which nature intended should be emphasized, and many a fine figure has been marred by lack of attention to that most important factor, the *correct corset* and how to wear it. Ask the corsetiere to assist you.

ROYAL WORCESTER CORSETS are the short cut to the fashionable figure of the moment. Try a pair and banish all your corset troubles.

BOSTON STORE
Denholm & McKay Co.

SOLE AGENTS ALSO FOR THE BON TON CORSETS $3 TO $15 AND ADJUSTO CORSETS $3 AND $5

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Johnson Service Company
Express Wagons and Motor Trucks
Warranted Perfect for
ONE FULL YEAR
1000 lbs. to 5 tons $1400 to $3250
All 4-Cylinder Power Plants and 3-Speed Transmissions
J. H. Watson, 54 Hermon Street
Sole Worcester County Agent

Automobile Repairing. Special Machinery
Machine Repairing Sprocket and Gear Cutting

IS YOUR ROOF ON TIGHT?

THE GEORGE W. CARR CO.
(H. C. WILSON)
ENGINEERS AND CONTRACTORS
WORCESTER

"BARRETT SPECIFICATION" (For Tar and Gravel Roofs) Send for our Booklet on the subject.

LOGAN STEAM COAL

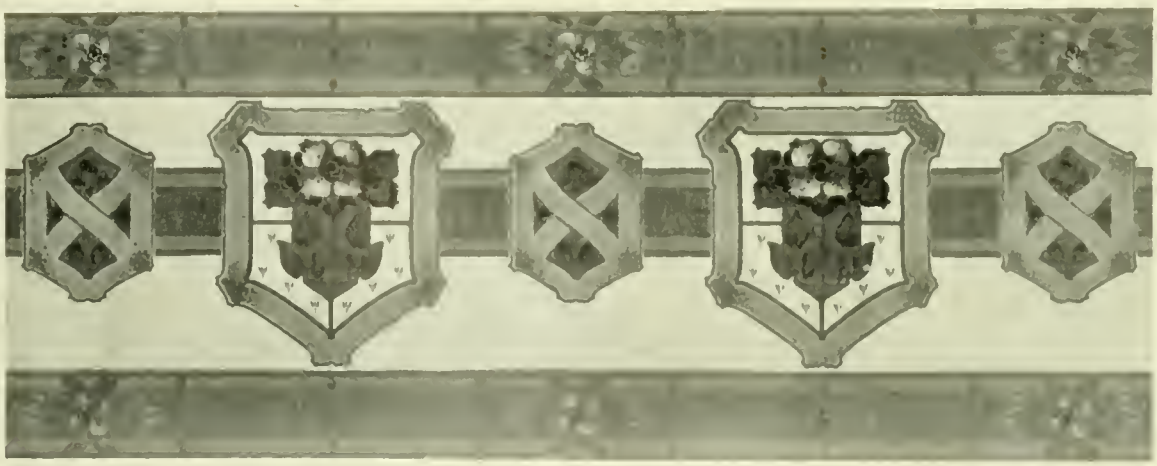
The *cheapest* steam coal in the world, *quality* considered. Delivered in our up-to-date manner when you want it.

For sale *only* by

F. E. POWERS CO. WORCESTER, MASS.
Offices 570 Main Street Yard 20 Southgate Street

WE SELL ALL KINDS OF MASONS' SUPPLIES

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



Extension frieze printed on blended leather grounds

"Vogue" Papers **Allen-Higgins Wall Paper Company** Worcester, Mass.

HOTEL STANDISH

WORCESTER, MASS.

NEW AND ATTRACTIVE

Permanent and transient guests accommodated
On direct route between Boston and New York. First-class garage nearby.
Rooms with or without baths.

Inquire for rates.

R. L. PRENTICE, *Proprietor* — J. McWALTER, *Manager*

WHAT WE CAN DO FOR YOU:—

Suggestions • Ideas • Sketches •
• Drawings for any purpose •
• Bird's-eye Views of Factory Plants •
• Photographs of Manufactured Goods •
and retouched for reproduction •
• Highest quality Halftones for Fine Printing •
• Zinc Etchings and Coarse screen Halftones
for NEWSPAPER and ADVERTISING USE •
• Woodcuts • Art Gelatine Prints • Electrotypes etc.

— for ADVERTISING HELPS in —

• Newspapers • Circulars • Catalogs • Booklets •
• Postcards • Posters • Display Cards •
• Business Cards • Calendars • Blotters •
• House organs • Office Stationery •
• Programs • Menus • Etc. •

Carlton Engraving Co.

No. 418 Main Street

Conveniently located—
Service and Satisfaction Guaranteed

All of which should be convincing of the fact that You don't need to send your orders away from Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

SOMETHING FOR YOU—MR. BUSINESS MAN

The Educational Department of the Young Men's Christian Association is Serving the Business and Professional Man by the following Special Courses

CHARACTER ANALYSIS—Teaching you how to "size up" Customers, Salesmen, or Employees. Sane and Practical as Taught by Katherine M. H. Blackford, M. D., of Boston.

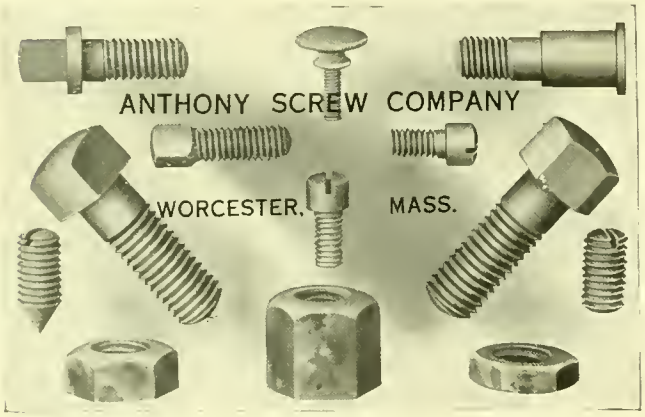
BUSINESS LAW—The Essential Things for Business Men to Know. A Class for Progressive Men taught by Edwin G. Norman, A. B. (Yale), and LL. B., (Harvard)

SALESMANSHIP—You may not be Selling Goods, but you are Selling your Service—Is this as Profitable as you Wish? There is much to Learn and our Sheldon School Courses will Teach you.

AUTOMOBILE—The Majority of our Students are Business Men who seek to know the Why and How of the Automobile. We are to open a Special Twelve-Lesson Course for Owners—Your Chauffeur can find Practical Knowledge here also.

WE ARE HERE TO SERVE YOU—ASK ABOUT IT

WILLIAM P. TAYLOR, Educational Director, 10 ELM STREET

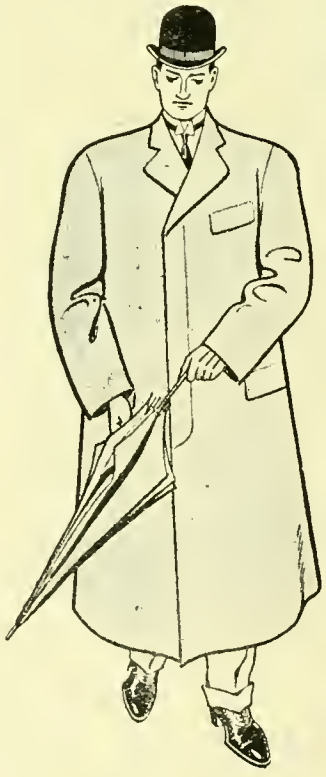


G. E. Stimpson & Co.

57-61-65 Pleasant Street
Worcester, Mass.

A large variety of up-to-date office furniture and appliances always in stock

AUTO COATS
NORFOLK SUITS
FINE WOOLENS
GAMBS BROTHERS
MERCHANT TAILORS
12 PLEASANT STREET
WORCESTER, MASS.



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

THE J. F. & W. H. WARREN COMPANY

ARCTIC STREET WORCESTER, MASS.

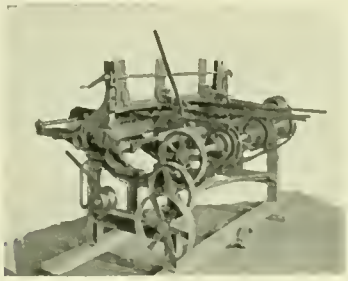
Manufacturers of

LEATHER BELTING

From Oak Bark Tanned Leather
In a NEW FACTORY
With NEW MACHINERY

Better equipped than ever to handle
YOUR business

Made in Worcester.



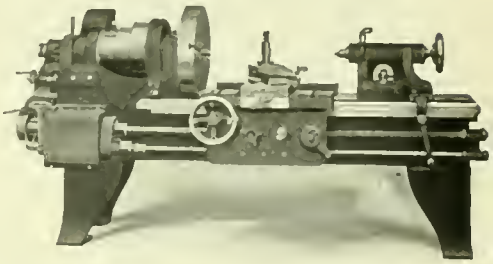
COMMERCIAL PHOTOGRAPHY

DAVIS & RIGGS
406 MAIN ST.
WORCESTER, MASS.

An Actual Photograph

Will aid your salesman

Mounted on cloth a specialty

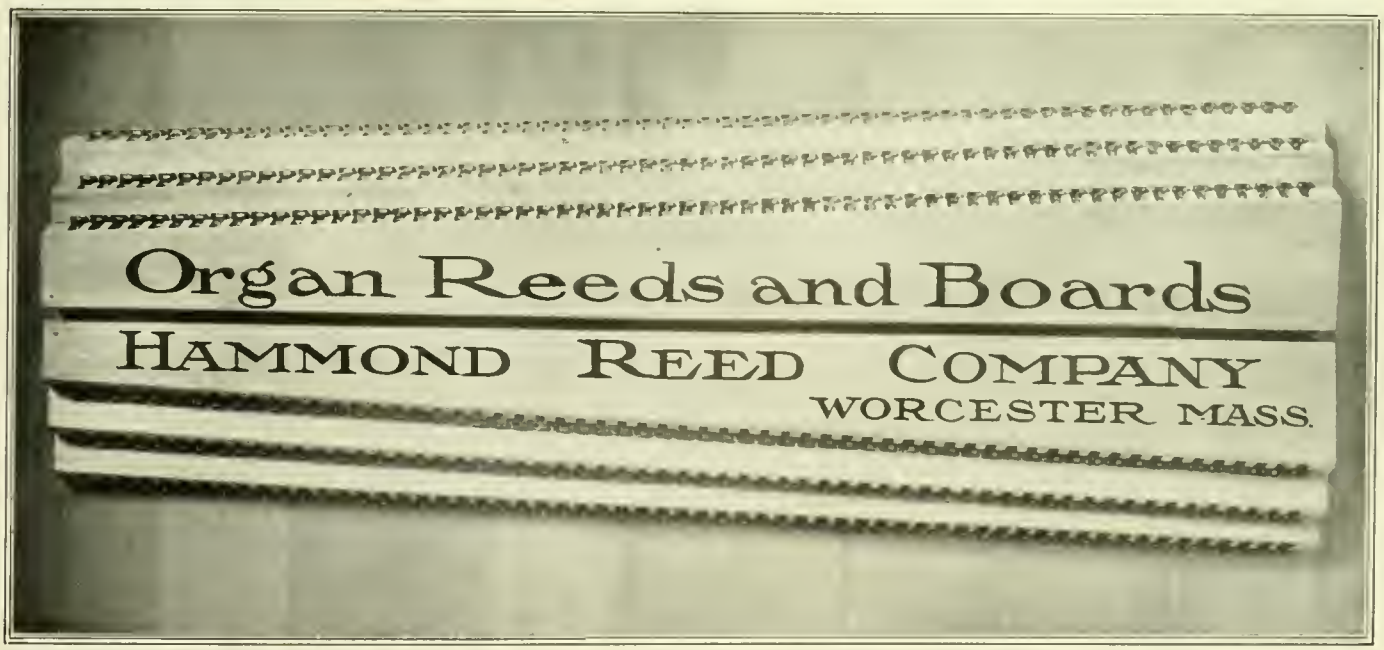


E. B. LUCE

Expert photographer of machinery, tools, etc.
Commercial work of all descriptions

TELEPHONE

Walker Building



YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

Stove Trimmings, Ball Bearings

Steam-Pipe Collars
Ferrules and
Sheet Metal Specialties
Case Hardening
Nickel, Copper and
Brass Plating
also Japanning

MATTHEWS MANUFACTURING CO.

104 Gold Street, Worcester, Mass.

Made in Worcester.

Our High Grade Grey Iron Castings

are soft and strong, made from high grade pig iron, and all our mixtures are from chemical analysis.

With our modern sand-blast method of cleaning we insure to our customers a perfectly clean casting, free from sand and scale. Give us a trial order and let us demonstrate to you that we can furnish what we claim in this respect.

We mould castings up to 15 tons

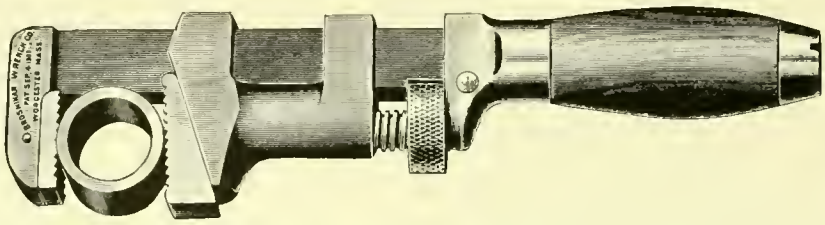
Capacity 20 tons a day

L. W. Pond Machine & Foundry Co.

Gold and Assonet Streets
Worcester, Mass.

Made in Worcester.

Look at the Wedge-Shaped Jaw



☞

¶ This is *movable* and enables the **Brosnihan Pipe Wrench** to be used as a ratchet with a pump handle movement. The sleeve jaw grasps the pipe instantly on the downward movement of the handle bar.

¶ And note this: This wrench can be used in place of the dog and monkey wrench for holding work for drilling in the lathe. It's the strongest and most durable wrench of its kind made.

¶ Extra jaws may be sent by mail for *two-cent stamp*.

¶ All wrenches 12″ and under have wood handles; larger, steel handles.

Write for full details and prices on this high-class tool.

THE BROSNIHAN WRENCH CO.

31½ Hermon Street, Worcester, Mass.

Notice to Millmen

Ira B. Hubbard, for twenty-five years foreman for the N. A. Lombard Company, is now located at their old stand, 73 Union Street, with the Hubbard Machine Company, engaged in the general repair business

Parts furnished and repairs also made on all woolen machinery
Improved Noiseless Comb built
Orders given immediate attention

Hubbard Machine Company

Telephone 5944

73 Union Street, :: :: Worcester, Massachusetts

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

May 2d, 1910, Announcement

AFTER two years' absence, during which time we were obliged to supply our patrons from Boston, much to our inconvenience and with great expense to them, we are happy to say we are home again at the

Old Family Wine Store

In April of this year we passed our Half Century Mark, our senior partner having established the business in 1860, and we were incorporated as the GEORGE F. HEWETT CO. in 1891. We claim to be the oldest house under one continuous management in New England. We shall continue as heretofore to supply our trade with the very best goods in the market. All our foreign goods we import direct, and our Whiskies are carried in bond until fully matured. We do not give trading stamps or offer cut prices, but we will sell our goods as low as any reputable house will sell the same quality of goods. We have no Bar or other objectionable features connected with our establishment, and we will gladly welcome a visit from any one, as we know we have the most perfect, sanitary and complete establishment to be found anywhere.

Family Trade With Us a Specialty

Amongst our leading brands will be found our famous

Cold Blast Ginger Ale, *Hewett's Private Stock Rye*
Iroquois Bohemian Lager, *Frank Jones' Golden Ale*
and the
Springfield Breweries' Co. Celebrated Hampden Ale and Porter

Correspondence solicited. Thanking our many friends for the good will and patronage they have bestowed so fully upon us in the past, we hope to merit a continuance of the same

George F. Hewett Co., 41-45 Waldo Street
Worcester, Mass.

Telephone 2455

M. D. HOLMES & SONS COMPANY

PLUMBING INSTALLATION | PLUMBING OUTFITS HEATING SYSTEMS FINE SHEET METAL WORK | PIPING CONSTRUCTION

WORCESTER, MASSACHUSETTS
SALEM SQUARE

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

We wish to call your attention to the **BEAVER BRAND** ROOFING MATERIALS

BEAVER BRAND ROOFING FELT ¶Beaver Brand Roofing Felt is made from a selected high-grade wool felt, and is saturated with the best-grade American coal tar. Beaver Brand Roofing Felt is made on a machine run by hand, which process, being much slower than steam-driven machinery, allows the felt to become thoroughly saturated, and allows the detection of imperfections in the felt. ¶To allow the Beaver Brand Roofing Felt to retain the oils, which are the life of the paper, it is allowed to dry naturally, slowly seasoned in the open air. ¶This was the process of making Beaver Brand Roofing Felt over forty years ago, and is the process that is used to-day.

BEAVER BRAND ROOFING PITCH ¶There are different kinds of roofing pitch: ¶The pitch from which too much oil (the life of the pitch) has been extracted is left hard and brittle, causing it to crack in cold weather; and the soft pitch, which, being thin, covers a large area, and in warm weather will run, thus leaving your roof in bad condition. ¶The Beaver Brand Roofing Pitch is made from straight run American coal tar. It is tempered to the right consistency, and while being firm, retains its elasticity. ¶A Beaver Brand label on a barrel of roofing pitch insures the quality.

H. J. HASCALL, 518 Main Street, Worcester, Mass.

Sole Agent for Worcester County

Our Private Dining Room

THE

Warren Hotel

120 Rooms

60 With Private Baths

EUROPEAN PLAN
CUISINE PAR EXCELLENCE

197-205 FRONT STREET

C. J. POMEROY, Manager

New Park Hotel

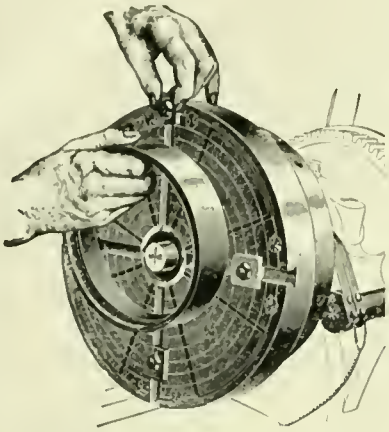
Opposite City Hall Park

¶A new main dining-room and a new office, both on the street floor, have just been finished, and modern elevator service installed. All the old coziness and more comfort.

57 Park Street
Worcester, Massachusetts

John F. Kelleher, *Manager*

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.



More than 2000 in use

Magnetic Chucks

for Piston Ring Grinders
Universal Grinders
Surface Grinders
Vertical Milling Machines and Planers

Rotary chuck, sizes 6″ to 36″. Flat chucks, 10″ to 8′ long

Patentees and Sole Manufacturers

O. S. WALKER & CO.

Made in Worcester.

W. H. DeLONG

Manufacturer of

DeLong's Dental Disks

Carborundum Separating Disks and Stump Wheels

Sand, Garnet, Emery, Cuttlefish and Crocus Paper Disks

WORCESTER, Dept. D 3 MASS.

Made in Worcester.

If you buy one barrel of this we know you will come again. It is of the same high quality that distinguishes all our oils and greases.

E. A. Buck & Company

East Worcester and Casco Streets
Worcester, Mass.

Palmer, Mass.

Buck's Best Auto Oil

ADAMS & POWERS

Dealers in
Doors, Sash, Blinds, and Builders' Finish, Window Frames, Mouldings, Etc.
Estimates from plans furnished
150-158 Union Street. Worcester, Mass.

Made in Worcester.

HUDSON BELTING CO.

WORCESTER, MASS.

Manufacturers of

LEATHER BELTING

Pure Oak Bark tanned, best quality.

Dynamo, waterproof and any special belts made to order.

Harness Leather Mill Strapping Rubber Belting
Canvas Belting Belt Lacing Belt Hooks
Wood Split Pulleys

Office and Factory, 1-3 Eaton Place.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

WORCESTER MAGAZINE ADVERTISERS

Adams & Powers, doors, sash and blinds, xxxi
Allen-Higgins Wall Paper Company, xxv
American Car Sprinkler Co., car sprinklers, v
Anthony Screw Co., xxvi
Barr, H. G., sensitive drills, xxi
Blake, Jr., & Co., George F., iron and steel, and supplies, xxii
Blanchard & Co., F. S., printers, Inside back cover
Bradley, Osgood Car Company, xx
Brosnihan Wrench Co., xxviii
Buck & Co., E. A., oils and gasoline, xxxi
Carlton Engraving Co., xxv
Carr Co., George W., granolithic and concrete work, xxiv
Claflin-Sumner Coal Co., viii
Coates Clipper Mfg. Co., flexible shafting, x
Commonwealth Motor Mart, xvii
Commonwealth Press, printers, viii
Crompton & Knowles Loom Works, looms, Inside back cover
Crosby, W. F., bonds, xvi
Davis Press, xx
Davis & Riggs, commercial photographers, xxvii
DeLong, W. H., dental disks, xxxi
Draper, Walter E., florist, xx
Fuller Regalia and Costume Co., insignia, badges, etc., xiv
Galasini, Thomas D., real estate, xii
Gambs Brothers, merchant tailors, xxvi
Golbert Last Company, Back cover
Graton & Knight Mfg. Co., The, leather belting, viii
Hammond Reed Co., organ reeds, reed boards, organ supplies, xxvii
Hamill, L. C., xi
Harrington & Richardson Arms Co., firearms, Inside front cover
Hascall, H. J., roofing materials, xxx
Heald Machine Co., The, machine tools, grinding machines, ix
Hewett Co., Geo. F., xxix
Heywood Boot & Shoe Co., fine shoes, i
Hill Dryer Co., clothes dryers, "Hustler" ash sifter, v
Hobbs Mfg. Co., wood-working and box-making machinery, v
Holmes & Sons, M. D., heating systems, xxix
Howard Bros. Mfg. Co., ii
Howard-Wesson Co., Inc., x
Hubbard Machine Co., woolen machinery, xxviii
Hudson Belting Co., leather belting, xxxi
Jackson St. Foundry, iron castings, xvii
Johnson, Mauritz, upholstery, xx
Kidder, R. E., drawing tables, v
Lombard, E. K., room, with power to rent, xxxii
Luce, E. B., commercial photographer, xxvii
Matthews Mfg. Co., stove trimmings, ferrules, etc., xxviii
Merchants National Bank, Inside front cover
Morgan Construction Co., rolling mill equipment, iv and back cover
Morgan Spring Co., Back cover
Mosher Real Estate Co., xvi
Multiple Woven Hose & Rubber Co., fire hose and belting xxxii
New England Audit Co., xi
New England Telephone & Telegraph Co., xviii
New Park Hotel, xxx
Norcross Brothers Co., contractors and builders, ii
Norton Company, grinding wheels, xxi
Norton Grinding Co., grinding machines, xii
Parker, John L. Co., metal corner bead, Inside front cover
Parker Wire Goods Co., xvii
People's Savings Bank, x
Pond Machine & Foundry Co., xxviii
Powers Company, F. E., coal, xxiv
Pratt & Inman, iron and steel, xxii
Prentice Bros. Company, drilling machines, engine lathes xv
Provident Life & Trust Co., xi
Reed & Prince Manufacturing Co., screws, bolts, rivets, etc., vii
Reidy, Maurice F., real estate, xiv
Rix, Anson, picture frames, vii
Royal Worcester Corset Co., xxiii
Sawyer Lumber Co., W. H., xv
Smith-Green Co., The, lime, cement, xiv
Spencer Wire Co., wire and wire articles, wire fences, vii
Standard Foundry Co., iron castings, xxi
Standish Hotel, xxv
State Mutual Life Assurance Co., iii
Stimpson & Co., G. E., office furniture, xxvi
Stockbridge Machine Co., shapers, x
Stone & Foster Lumber Co., xxii
Tyler's Business College, xvi
United States Envelope Co., vi
Walker & Co., O. S., chucks, xxxi
Warren Hotel, The, xxx
Warren, J. F. & W. H., leather belting and mill supplies, xxvii
Watson, J. H., motor trucks, xxiv
White & Bagley, machine and auto oils, Back cover
Whitaker Reed Co., loom reeds, belt hooks and wire goods, xxxii
Williams & Bridges, wooden and paper boxes, vii
Winslow Skate Co., ice and roller skates, xix
Wire Goods Co., wire hardware, Back cover
Woodbury & Co., photo-engravers, artists, bird's-eye views, etc., xv
Wood Lumber Co., P. W., xvii
Woodward & Powell Planer Co., light and heavy planers, ix
Worcester Business Institute, xiv
Worcester Gear Works, Back cover
Worcester Machine Screw Co., set, cap and machine screws, xix
Worcester National Bank, iii
Worcester Trust Co., xiii
Wright Co., M. S., vacuum cleaners, xix
Wright Wire Co., wire and wire cloth, wire rope, etc. i
Wyman & Gordon Co., drop forgings, Inside front cover
Young Men's Christian Association, xxvi

Established 1869 Incorporated 1906

The Whitaker Reed Co.

LOOM REEDS

For weaving Cotton and Woolen Goods, Carpets, Wire Cloth, Rattan, Etc.

Royal Ring Travelers Belt Hooks
Mill Wire Goods

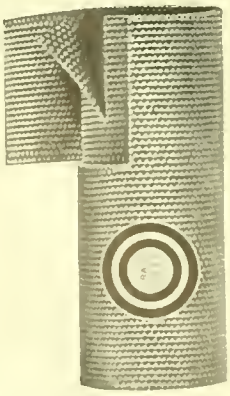
84 Austin St., Worcester, Mass.

Made in Worcester.

Room, with Power
TO RENT

E. K. LOMBARD

64 School Street WORCESTER, MASS.



"BI-MOORE"
BRAND
FIRE HOSE

Two-ply, multiple woven, cotton, rubber-lined Fire Hose, made from best materials, the two jackets being woven and bound together at a single operation. Very light, strong, and easy to handle in service.

"BEST" Brand WATERPROOF BELTING

A solid, multiple woven cotton belting, absolutely waterproof, and a perfect transmitter of power.

SAMPLES ON REQUEST

The Multiple Woven Hose & Rubber Company
Worcester, Mass., U.S.A.

Made in Worcester.

YOU will benefit THREE by stating that you saw this advertisement in the WORCESTER MAGAZINE—yourself, the advertiser and the publication.

A LOOM FOR EVERY FABRIC

WORCESTER PLANT.

Everything that may be woven by power—practically every kind of fabric used by civilized beings—is produced on looms built in these works.

Woolens and worsteds, silks, velvets, ribbons, cotton goods of every description, carpets and rugs, mattings and hammocks, belting and webbing, furnish an idea of the great variety of our weaving machinery.

In addition are dobbies, jacquards and supplies built in all of the different plants.

CROMPTON & KNOWLES LOOM WORKS,

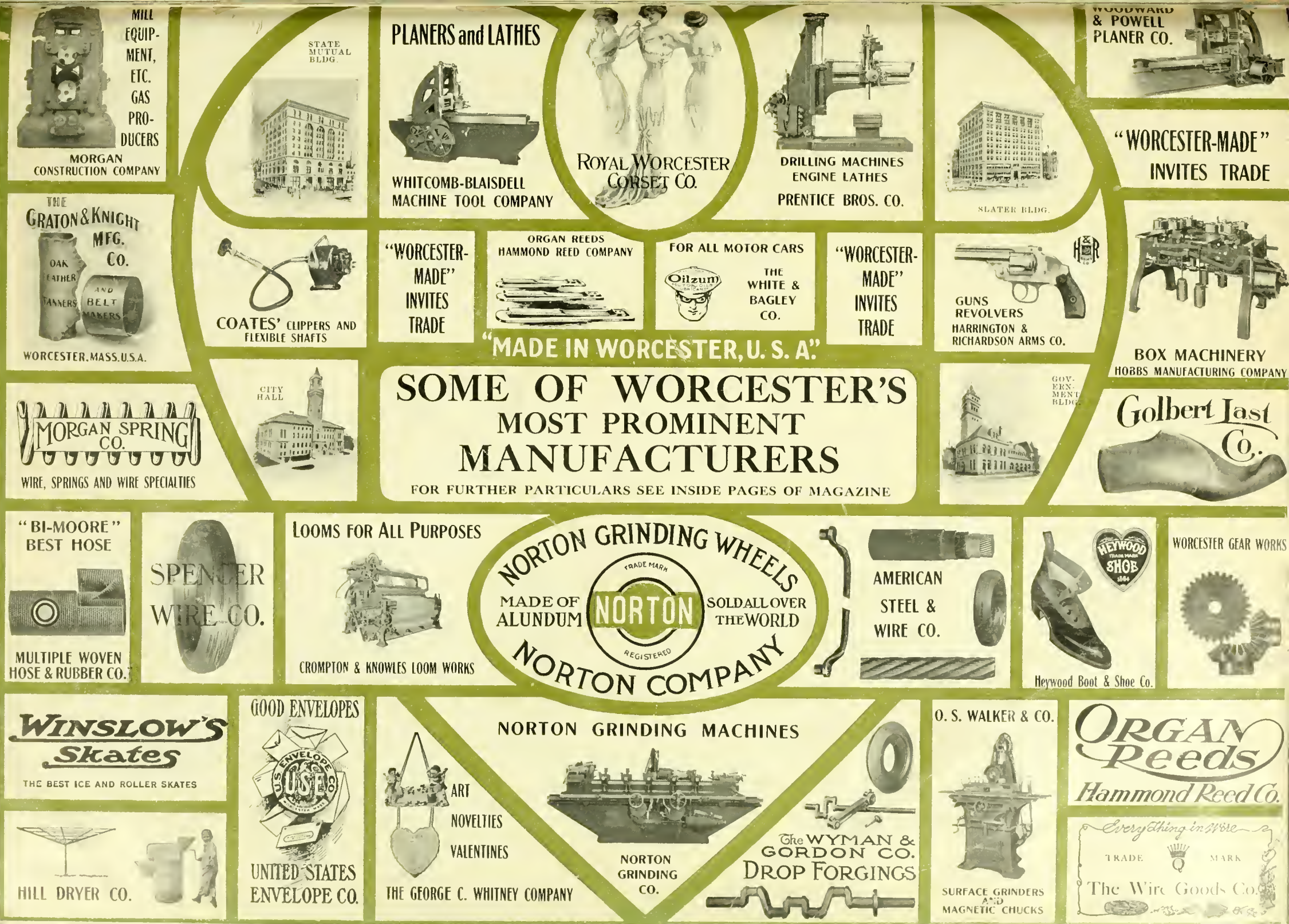
WORCESTER, PROVIDENCE AND PHILADELPHIA.

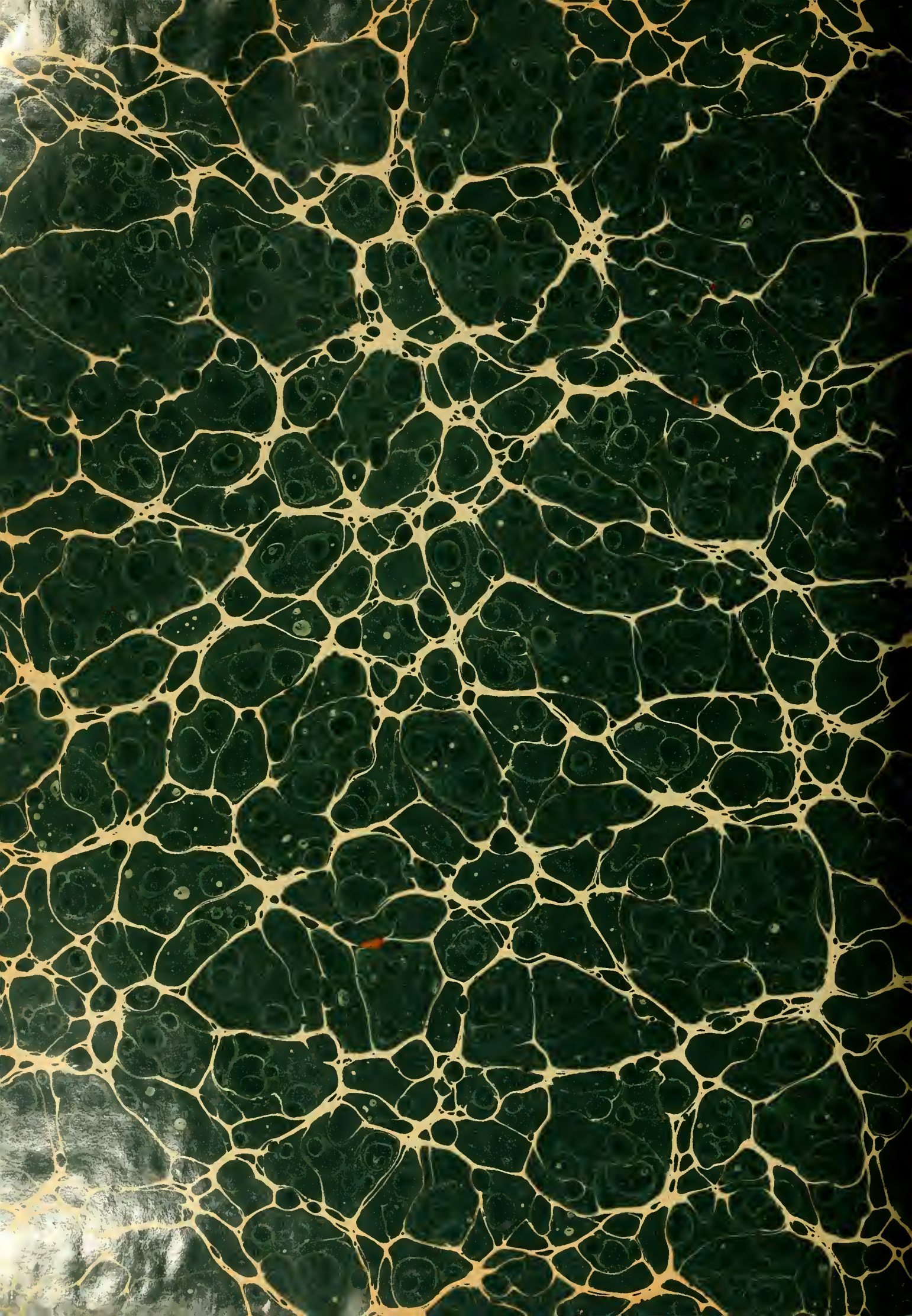
The General Run

Crude, commonplace, superficial—that describes the general run of printing. Many do not know the difference between a poorly printed booklet and one produced by time, patience and brains. But if only one in ten knew good printing, it would pay to send out that kind; for the one man among ten is probably the very customer you most desire to impress favorably and the one whose business would mean most to you. Don't go after high-class trade with cheap printed matter. It is a waste of postage stamps. It will pay you to use the Blanchard grade of printing. Let us show you what we have done for others and tell you what we can do for you

The Blanchard Press

Worcester, Mass.


MILL EQUIPMENT, ETC. GAS PRODUCERS
MORGAN CONSTRUCTION COMPANY
STATE MUTUAL BLDG.
PLANERS and LATHES
WHITCOMB-BLAISDELL MACHINE TOOL COMPANY
ROYAL WORCESTER CORSET CO.
DRILLING MACHINES ENGINE LATHES
PRENTICE BROS. CO.
SLATER BLDG.
WOODWARD & POWELL PLANER CO.
"WORCESTER-MADE" INVITES TRADE
THE GRATON & KNIGHT MFG. CO.
OAK LEATHER TANNERS AND BELT MAKERS
WORCESTER, MASS. U.S.A.
COATES' CLIPPERS AND FLEXIBLE SHAFTS
"WORCESTER-MADE" INVITES TRADE
ORGAN REEDS HAMMOND REED COMPANY
FOR ALL MOTOR CARS
Oilzum
THE WHITE & BAGLEY CO.
"WORCESTER-MADE" INVITES TRADE
GUNS REVOLVERS
HARRINGTON & RICHARDSON ARMS CO.
BOX MACHINERY
HOBBS MANUFACTURING COMPANY
"MADE IN WORCESTER, U. S. A."
CITY HALL
SOME OF WORCESTER'S MOST PROMINENT MANUFACTURERS
FOR FURTHER PARTICULARS SEE INSIDE PAGES OF MAGAZINE
GOVERNMENT BLDG.
Golbert Last Co.
MORGAN SPRING CO.
WIRE, SPRINGS AND WIRE SPECIALTIES
"BI-MOORE" BEST HOSE
MULTIPLE WOVEN HOSE & RUBBER CO.
SPENCER WIRE CO.
LOOMS FOR ALL PURPOSES
CROMPTON & KNOWLES LOOM WORKS
NORTON GRINDING WHEELS
MADE OF ALUNDUM
TRADE MARK NORTON REGISTERED
SOLD ALL OVER THE WORLD
NORTON COMPANY
AMERICAN STEEL & WIRE CO.
HEYWOOD TRADE MARK SHOE
Heywood Boot & Shoe Co.
WORCESTER GEAR WORKS
WINSLOW'S Skates
THE BEST ICE AND ROLLER SKATES
GOOD ENVELOPES
U.S. ENVELOPE CO.
UNITED STATES ENVELOPE CO.
NORTON GRINDING MACHINES
ART NOVELTIES VALENTINES
THE GEORGE C. WHITNEY COMPANY
NORTON GRINDING CO.
The WYMAN & GORDON CO.
DROP FORGINGS
O. S. WALKER & CO.
SURFACE GRINDERS AND MAGNETIC CHUCKS
ORGAN Reeds
Hammond Reed Co.
HILL DRYER CO.
Everything in Wire
TRADE MARK
The Wire Goods Co.



LIBRARY OF CONGRESS
0 014 111 069 A